REPORT

ON

THE FOREST ADMINISTRATION

OF

BRITISH BURMA

FOR

The year 1878-79.

RANGOON:

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1879.

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RESOLUTION

ON THE

FOREST ADMINISTRATION

OF

BRITISH BURMA

FOR THE YEAR 1878-79.

Extract from the Proceedings of the Chief Commissioner, British Burma, in the Forest Department,—No. 145, dated the 5th September 1879.

READ—

Report on the Administration of the Forests in the Tenasserim and Pegu circles, for the year 1878-79.

RESOLUTION.—For greater convenience the present report has been prepared throughout by Major Seaton, the senior Conservator of Forests in British Burma, who has an experienced acquaintance with the entire forest administration of the province. The Chief Commissioner appreciates the punctuality with which the report has been submitted.

2. The department still continues to be administered in accordance with the Forest Act, VII. of 1865, no definite conclusion having yet been arrived at in regard to the extent to which the Indian Forest Act, 1878, can in certain respects be practically applied to the peculiar circumstances of British Burma. A Committee, appointed early in the present year to consider the question, has submitted its report, but there are many difficulties in the way of forest legislation for this province, and the subject is of such vast and wide importance that it is impossible to come to a satisfactory decision without a full enquiry into the merits of the case and prolonged and careful deliberation. The Chief Commissioner hopes to have the benefit of the Inspector-General of Forests' opinion in personal consultation before forming a final determination in the matter.

New Forest Act for Burma.

3. To put a check on the indiscriminate destruction of wild elephants, which was reported as being prevalent in certain parts of Pegu, the Government of India suggested in 1877 that it might be expedient to pass an Act on the subject, suited to the circumstances of British Burma. This measure was unanimously advocated by the divisional and district officers, and a short Act, VI. of 1879, was accordingly passed by the Supreme Government and came into force on the 1st April last. In conjunction with this enactment, it was also suggested that it might be of practical benefit to form special reserves in the more remote localities, within which elephants could breed in a state of semi-captivity and without much danger of being molested. With this object in view Major Seaton inspected the Megla and Ta-oo forests, and his report was forwarded to the Revenue Department of the Government of India. Opinions on this question vary greatly, however, and at the present time a letter is before the Government of India with a recommendation by the Chief Commissioner that, as there seems to be no real advantage to be gained by the project, the matter be allowed to drop.

Protection of wild elephants.

4. The energies of the Forest Department were concentrated during the field season of the year in the selection and demarcation of forest reserves, and although the work was somewhat retarded by the insufficient number of officers available for it consider-

State reserves.

able progress was made on the whole. At the beginning of the year, the entire area of sanctioned reserves in the Tenasserim circle amounted to 85 square miles, while proposals were before the local Government for sanction to eight other reserves. These were approved of, and the work of defining their boundaries was completed by the close of the year. The aggregate area represented by these new reserves is 166 square miles, so that the entire extent of sanctioned State reserves in Tenasserim on 31st March 1879 was 251 square miles. Of this area, 174 miles lie within Amherst district, 39 miles within Shwe-gyeen district, and 38 miles within Salween district. The work of examining and selecting fresh areas for reserves resulted in the selection of about 90 square miles (two reserves) in the Thoungyeen district. Of this area some 15 miles had however been examined in the previous year. An area of 20 square miles of pine-forest (*Pinus khasya*) near Loomatee, in the Salween district, where *toungya*-cutters were said to be committing great havoc, was also examined; but its reservation has not yet been determined on, as it is doubtful whether there is any need for such a reserve. The ground will be carefully examined by an experienced officer next cold season. Greater progress would have been made in the work of selection, but for the deplorable murder of Mr. Nepean, shortly after he had taken the season's work in hand.

Tenasserim.

5. In the Pegu circle the area of sanctioned State reserves at the beginning of 1878-79 was, as explained in the Resolution on the Report for 1877-78, 565 square miles only, or in reality 58 miles *less* than at the end of 1876-77, because certain areas reserved in previous years, under rules to which sanction had never been given, had to be dealt with again *de novo*. Consequently at the beginning of 1878-79 large tracts were waiting for final disposal. It was necessary to move with caution and to see that the rights of the Karens and others in the different localities were not harshly interfered with; and it is believed that in the cases where reserves have been sanctioned during the year under notice, substantial justice has been done to their requirements and claims. The total area of the reserves sanctioned amounted to 594 square miles, occurring solely in the Tharrawaddy forest division. Of these 150 square miles are burdened with *toungya* rights. This brings the total area of State reserves sanctioned in Pegu to the end of 1878-79 up to 1,159 square miles. The entire extent of the State reserves in the province is now therefore 1,410 square miles, and at the close of 1878-79 proposals for the reservation of certain selected tracts in both circles, aggregating several hundred miles, were ready for consideration.

Pegu.

6. The outlay for demarcating the reserves sanctioned in the Tenasserim circle amounted to Rs. 1,265, or Rs. 7-10-0 a square mile. The expenditure in Pegu was Rs. 4,554, and the rate per square mile was the same, although it is stated that great difficulties were encountered in obtaining labour and guides in the thinly-populated Attaran forests, and that the jungle through which the lines had to be cut was so dense as to considerably retard the progress of the work.

Cost of demarcating the boundaries of reserves.

7. Since 1875 no girdling of mature trees has been allowed, the attention of the Forest staff being directed principally to demarcation work. It was originally the intention of the Government of India that girdling operations should continue under suspension until 1st April 1879, when the question would again come up for discussion. The staff of officers available was not sufficiently strong, however, to cope with demarcation and girdling work simultaneously, and it seemed advisable to push forward the demarcation work as rapidly as possible in the first instance. The Conservators were asked for their views and submitted them in September 1878,—Major Seaton proposing that in the Tenasserim circle 6,000 first-class trees should be girdled during the next three years; and Mr. Ribbentrop proposing the girdling in the Pegu circle of 27,400 trees during the same period. In recommending these proposals to the Government of India, the Chief Commissioner pointed out that, owing to the number of officers on leave, it had been found impossible to depute a Civil Officer for demarcation-work, and, this being so, it would be better to allow

Girdling operations.

the Forest staff to commence girdling work at once. Sanction was given by the Government of India on 7th February 1879,—too late unfortunately to admit of anything being done in Pegu; while in Tenasserim only 934 teak trees were girdled, out of an intended total of 2,000 trees. Of these 635 were girdled inside the Meplay reserve, and averaged 7½ feet in girth each. The remaining 299 trees were girdled in tracts outside the Meplay reserve. Besides the foregoing 506 trees of other species were also girdled, namely, 311 trees in reserved and 195 trees in unreserved tracts, with the object of affording more breathing space for teak trees growing beside them. Since the year closed, the Government of India have countermanded their instructions as to girdling operations, and directed that for the present these are to be confined to the Kyoukmasin forest, near the Burmese frontier, a report being required later on in the year as to what further girdling operations the department, with the slightly-increased controlling establishment just sanctioned, can then undertake.

Fire-protection.

8. The cost of fire-protection during the year in the Tenasserim circle amounted to Rs. 968-9,—the areas successfully protected being 31,770 acres, compared with 30,634 acres in the previous year, at a cost of Rs. 468-4. The expenditure under this head has increased considerably during the last three years; but in 1878-79 the increase is accounted for chiefly by the cost of laying down permanent fire-traces for some 13 miles in the Sinzway reserve. The protection secured was satisfactory, only one fire, which swept over some 1,200 acres in the Wamoo reserve, having broken out during the season. With reference to this fire, it may be remarked that no report of it seems to have been sent to the local Government at the time. It is stated that the reserve was set on fire by a villager collecting honey, an operation which always needs the application of fire. If honey cannot be gathered without the use of fire it would be better to prevent its collection altogether in these reserves. In the Pegu circle fires occurred in two reserves in Tharrawaddy; 25 acres of the Magayee plantation were destroyed, and the Kyetpyoogan plantation was again burnt throughout. A fire first broke out in the last-named plantation on 30th March 1879. This was extinguished after half the plantation had been burnt. Suddenly, on 2nd April, it was again on fire, and owing to the high wind blowing and the want of help the entire remaining area was sacrificed. The fire-trace round the plantation was reported as being in good order and properly cleared at the time of the fire. A careful enquiry was ordered into the circumstances of both fires; but the Conservator's report has not yet been received. The remarks on this subject in paragraph 3 of Revenue Secretary's letter No. 448F., dated 26th May 1879, reviewing the British Burma Forest Report for 1877-78, should have a salutary effect in stimulating the watchfulness of the officers in charge of these plantations. The cost of fire-protection in Pegu was Rs. 8,907, a slight increase over that of the year before,—the areas successfully protected being 39,552 acres in 1878-79 compared with 37,564 acres in 1877-78.

Toungya-cultivation in reserved forests.

9. The general principles laid down by the Government of India as to the restriction to be put on *toungya*-cultivation in forest tracts are, that *toungyas* are not to be cut in demarcated reserved forests, except where the cultivation can be strictly confined to a separate and demarcated area within the reserves; or where it may be found expedient and safe to promote the cultivation of teak by means of such *toungyas*; or where, from long-established usage, the removal of the people from the locality would involve serious hardship to them; and that every endeavour must be made to prevent injury to valuable forests, the demarcation and reservation of which there has been no time yet to carry out. These principles are being kept steadily in view by the Forest Settlement Officers in regard to reserved forests; but in unreserved forests the control of *toungya*-cultivation presents difficulties which can only be overcome by the exercise of much caution and patience.

Toungya teak cultivation.

10. In Tenasserim, the Karen cultivators planted a number of *toungyas* with teak during the year, the total area being given as 182 acres. Payment was made for 171 acres of this work according to the number of seedlings raised on the area planted—the entire cost

being Rs. 1,022, or Rs. 6 an acre. Payment had not been made at the close of the year for the remaining 11 acres. The total area under *toungya* teak plantations in Pegu now amounts to 1,664 acres and includes 388 acres of scattered *toungyas*. Of these 375 acres were laid down in 1878-79, at an average cost ofRs. 5-8 an acre. This is a much higher rate than was paid for the work done in the previous year, but no reason has been given. If anything like adequate protection from fire can be secured—and this is a matter of great difficulty, owing to the recklessness for which the Karens are notorious in regard to the handling of fire—the *toungya* system of cultivating the reproduction of teak promises valuable results. Very little was done during the year in propagating teak by the "dibbling in" process. The results in Pegu were very poor, but greater success attended an experiment made in the Sinzway reserve in Tenasserim, where healthy seedlings were reared over a line two miles in length.

Teak plantations.

11. No additions were made to the area of teak plantation during the year. Of the three small plantations in Tenasserim the largest, Thingannee-noung (10 acres), is now included within the boundaries of the reserve of that name. The plantations in Pegu are returned as representing an area of 3,322 acres, or precisely the same extent as in 1877-78. It is not understood, however, why the figures should be the same in both years, seeing that fire swept through the entire Kyetpyoogan plantation (683 acres), and also destroyed 25 acres of the Magayee plantation in 1878-79. Some allowance for these disasters should apparently be made in form 46 attached to the report.

Minor cultivation.

Pithecolobium saman.

Ficus elastica, vanilla and mahogany.

12. The attempts at propagating exotic plants and trees do not seem very successful, and in regard to any practical or economic benefit they have up to this time conferred on the arboriculture of the province, they are for the most part little better than valueless. Young trees of the *Pithecolobium saman* however, of which seeds were received from India last year, are reported as thriving in all parts of the Pegu circle where they were distributed. This tree gives promise of being a valuable acquisition to the province. The *Ficus elastica* plants have suffered from drought, and both they and the vanilla plants and mahogany seedlings have diminished in number. At Mergui, in the Tenasserim circle, various sorts of experimental cultivation have been tried for several years in the Forest office compound. During the year 1878-79 an area of a few acres, about three miles from Mergui, was cleared and prepared for the reception of plants and seedlings. A considerable number of *Hevea braziliensis* plants were brought from Ceylon by a forest subordinate specially sent there for the purpose, and there is every reason to suppose they will do well, judging by the condition of the trees formerly received from Calcutta. Seedlings of the Akyaw or Eagle-wood tree, which grows on the islands in Mergui archipelago, and to which special reference was made in the Forest Report for 1876-77, have also been procured and been planted out since the year closed. At the request of the Secretary of State for India, a block of wood from this tree containing a piece of the scented resin or gum which occurs in it, has been forwarded to England, with the view of testing its alleged value as an article of commerce. The expenditure on the Thantoungyee Cinchona plantation is still very heavy, being for the year Rs. 4,800. The necessity for reducing the expenses of the plantation has already been strongly impressed on Mr. Ribbentrop; but had it not been for the resignation of the Karen apprentices early in the year, and a consequent saving of Rs. 900 thereby, the expenditure would have been very nearly as high as that of 1877-78. There has been a small saving in coolies' wages, and the plantation has increased by an acre; but although there are now in it about 100,000 plants of various varieties of cinchona—some thriving and others looking sickly—it is Major Seaton's opinion that, "all things considered, the cinchona experiment does not promise well. The oldest trees dying off, and the trees of very small size flowering and fruiting freely, are only too sure signs that the tree finds itself in a site not adapted to its requirements." Enquiries were recently made as to a grant of land in the neighbourhood of

Cinchona.

Thantoungyee for cinchona cultivation by a Ceylon planter, who has been furnished with all available particulars as to the locality. There has been no time yet to learn what decision he has come in the matter. The satisfactory condition of three coffee-plants planted out towards the end of 1878 makes it a matter of regret that the experiment was not tried on a much larger scale. Instructions have since been issued that this should be done.

Coffee.

13. Considering the number of fires which occurred in the Pegu forest *reserves* and *plantations* it seems strange that no prosecutions were instituted for breaches of rules within reserves. In the case of the fires which occurred in the Bwet reserve alluded to at page 11 of the report, it was surely possible to have fixed the blame somewhere. The same remark applies to the cases mentioned in paragraphs 86 and 87 of the report. In the unreserved forest tracts of the Pegu circle there was a satisfactory decrease in the number of prosecutions, only 19 cases having been tried, affecting 63 persons, of whom 59 were convicted, against 50 prosecutions involving 132 persons, of whom 106 were convicted and punished in 1877-78. In Tenasserim there was only one prosecution in connection with a reserved forest, and it broke down. For offences in unreserved tracts the cases amounted to 70 against 86 persons, of whom 68 were convicted, compared with 61 cases in 1877-78 against 70 persons, of whom 57 were convicted.

Prosecutions for breach of Forest rules.

14. The following table shows the entire quantity of teak and other timber removed during the year from Government forests, both departmentally and by purchasers and lessees, compared with the out-turn of the three preceding years :—

Out-turn of timber from Government Forests.

		Logs.	Pieces.	Sleepers.	Tons.
1875-76	Teak	55,264	...	2,521	46,597
	Other sorts	2,019	3,650	8,902	11,754
1876-77	Teak	52,334	...	44,493	46,431
	Other sorts	2,157	1,282	...	2,608
1877-78	Teak	41,642	2,645	31	39,081
	Other sorts	3,724	...	...	3,188
1878-79	Teak	25,295	3,755	...	22,768
	Other sorts	2,326	978	6,364	2,219

The out-turn of teak in 1878-79 includes 212 tons extracted by the Railway department on payment, and 25 tons by private purchasers, as also 996 tons removed by the lessees of the forests referred to in paragraph 29 of the report. The anticipations of a great falling-off in the out-turn for 1878-79 are fully borne out by the above figures, only dead and fallen timber having been removed, while the great decrease in the quantity of teak extracted from the leased Attaran forests (the figures being 2,444 logs and pieces only against 5,901 in 1877-78) shews that they have been pretty well denuded of all such timber as the lessees are allowed to fell. If it can be arranged it would seem expedient to depute an experienced officer as soon as possible to report on the general condition of these leased forests.

15. In Pegu, as shown above, 1,472 tons of the reserved species of timber other than teak, were worked out by the department during the year—and in Tenasserim 747 tons were extracted, or a total of 2,219 tons, compared with 3,361 tons in 1877-78.

Out-turn of other woods.

16. Free and trade permits for the extraction of the reserved kinds of timber were issued in each case to the extent of about only one half the number granted in 1877-78, when it is perhaps not too much to say that there were many abuses of the free permit system, which was, it is believed, frequently taken advantage of to obtain timber for purely trade purposes. As regards the decrease in trade permits, it was probably due in a great measure to the depressed state of the timber market throughout the year.

Permits.

17. No less than 18,349 logs of drift timber were recovered by the department during the year, being 4,779 logs more than in 1877-78. Of these 6,818 were salved on the Salween river, the state of which was more favourable for such operations than was the case during the previous monsoon, when 4,384 drift logs were brought to the Moulmein depôt.

Salving operations.

Imports of teak from beyond the frontier.

18. There has been a great falling-off in the quantity of teak imported from beyond the frontier during the year by the Salween and the Irrawaddy, and a slight increase in that by the Sittang. The following are the quantities for each of the past three years :—

Route.	1876-77.	1877-78.	1878-79.	Increase or decrease in 1878-79, compared with 1877-78.	
	Logs.	Logs.	Logs.		
By the Salween	124,490	143,846	125,428	...	18,418
„ Sittang	39,502	44,204	47,184	2,870	...
„ Irrawaddy	6,891	23,708	6,406	...	17,297
Total ...	170,883	211,818	178,978	Net decrease	32,840

The only reason given for the decrease *viâ* the Salween is that the rains were not so heavy as in the preceding year, and were over sooner than usual. Probably, too, the stock of high-class timber within easy reach of the floating-streams is diminishing—indeed, this is pretty evident from the fact that, of the timber sent down during the year by the lessees of the King's forests north of Toungoo, some 20,000 logs are said to have been of poor quality. Very little is known about the actual condition of these forests. Colonel Beddome, Conservator of Forests, Madras, alluded recently to the subject in a memorandum submitted to his Government after a short tour in Burma during the cold season of 1878-79. The only persons likely to have a fair idea of the progress they have made towards exhaustion are the lessees of the forests ; but an enquiry addressed to them has elicited no information of any value.

Duty realized on foreign teak entered at Kadoe.

19. The quantity of foreign teak cleared on payment of duty at Kadoe during the year was somewhat over 10,000 logs less than the quantity cleared in 1877-78; and the duty realized on it was Rs. 2,26,269, or Rs. 56,664 less than the collections in that year. This was due to the depressed state of the market, the failure of two important European firms whose transactions in timber had been very extensive, and partly to a quantity of inferior timber from the Ningyan forests of Upper Burma being forced on the market for sale by auction.

Arakan forests.

20. The Officiating Commissioner of Arakan has lately brought up the question of protecting the forest interests of Government in that division, where there is not a single officer of any description connected with the Forest Department. Major Seaton is now visiting Arakan, by desire of the Chief Commissioner, to ascertain what measures should be taken, and his report will be duly communicated to the Government of India.

Financial out-turn of the year.

21. The financial results of the year's work were as follows :—

Receipts.

	Rs.
I.—Value of timber brought to depôt by direct Forest agency	6,98,529
II.—Timber and minor produce removed from forests by lease-holders, purchasers, &c.	99,066
III.—Revenue from confiscated and drift wood	68,099
IV.—Revenue from duty on foreign timber at Kadoe	2,26,269
V.—Miscellaneous revenue, including fines, &c.	44,099
Total, omitting fractions ...	11,87,562

Disbursements.

A.—Conservancy and working expenses	5,00,783	
B.—Establishments	2,17,618	
		7,18,401
Net revenue ...		4,19,161

These figures, as regards the total receipts and disbursements, fall very much short of the budget-estimates ; but as regards the receipts, they are better than the regular estimates by about Rs. 43,560, while the disbursements are less by about Rs. 76,600. The net revenue of the year is below that of 1877-78 by Rs. 3,28,046. The receipts in Tenasserim, compared with those of the year 1877-78, were :—

		1877-78.	1878-79.	Increase.	Decrease.
		Rs.	Rs.	Rs.	Rs.
Tenasserim	I.	3,91,325	2,13,061	...	1,78,264
	II.	21,022	17,858	...	3,164
	III.	33,307	19,292	...	14,015
	IV.	2,82,933	2,26,269	...	56,664
	V.	5,037	5,565	528	...
	Total ...	7,33,624	4,82,045	...	2,51,579

The causes leading to this great falling-off were the unusually prolonged depression in the timber-trade, resulting in fewer and less profitable sales of Government timber, the failure of two firms in Moulmein, which were involved in the ruin of the City of Glasgow Bank, and the diminished clearances of dutiable timber from the Kadoe depôt. The estimated average receipts at Kadoe are Rs. 20,000 a month; but from August 1878 onward to the end of the year, with the exception of November, they averaged Rs. 11,600 only. Besides the firms that failed, three large saw-mills ceased working.

In Pegu the receipts, as compared with those of 1877-78, were—

		1877-78.	1878-79.	Increase.	Decrease.
		Rs.	Rs.	Rs.	Rs.
Pegu	I.	7,32,545	4,85,467	...	2,47,078
	II.	97,763	82,108	...	15,655
	III.	35,643	49,408	13,765	...
	IV.	...	...	...	...
	V.	3,448	38,534	35,086	...
	Total ...	8,69,399	6,55,517	...	2,13,882

Under head I. the decrease is attributable to the great falling-off in the quantity of timber sold during the year, the sales of teak having been only 13,982 tons, or 6,300 tons less than in 1877-78; and of other kinds, of wood 1,584 tons, against 2,340 tons in that year. The same causes which affected the sales of timber in Tenasserim, operated also in Pegu, namely, overstocked and depressed markets, and the unfavourable character of the floating-season. The decrease under head II. was chiefly caused by diminished revenue from permits for the boiling of cutch, the manufacture of which has declined in the Prome and Tharrawaddy districts. The improvement under head III. is due to extensive salving-operations in three divisions during the floods of 1878. The increase under head V. is due to credit being taken, under orders from the Comptroller-General, for the value of certain elephants lent to contractors, and paid for in work done. This is really a matter of account, not of revenue.

Expenditure.

22. The expenditure of the year aggregated Rs. 7,18,400, and may be thus compared with that of 1877-78 :—

		1877-78.	1878-79.	Increase.	Decrease.
		Rs.	Rs.	Rs.	Rs.
Tenasserim	A.	2,85,012	1,51,869	...	1,33,143
	B.	66,820	71,989	5,169	...
	Total ...	3,51,832	2,23,858	...	1,27,974
Pegu	A.	3,55,050	3,48,914	...	6,136
	B.	1,48,985	1,45,629	...	3,306
	Total ...	5,03,985	4,94,543	...	9,442
	GRAND TOTAL ...	8,55,817	7,18,401	...	1,37,416

The expenditure in Pegu includes a sum of Rs. 75,104, being timber charges actually belonging to 1877-78, but brought to account in 1878-79. Otherwise, it calls for no special remark, the variations and fluctuations being of an ordinary and normal character. In Tenasserim, the expenditure was less than had been anticipated, on account of the small out-turn of timber from the Government forests, and the non-delivery by the contractors of a large number of pyingado sleepers, payment for extracting which will fall within the year 1879-80. The Gun-carriage department, Madras, have been in the habit of indenting for 100 tons of padouk annually, but none was asked for in 1878-79, and the cost of preparing the timber (some Rs. 6,000) was consequently not incurred.

Shipments of timber to other departments and administrations.

23. Some teak squares were supplied to the Bombay and Madras Governments, as well as 100 logs of padouk to the former. A number of pyingado and anan wood sleepers were shipped to Calcutta for sale on account of the department, but the profit on these transactions is so trifling as to make it doubtful whether it is worth while to undertake them.

Health of the Forest staff.

24. Fever was prevalent in the Tenasserim forests during the dry season, owing, it is thought, to rain having fallen at an unusual period of the year. Several officers, including the Conservator, suffered severely, and there was much sickness amongst the subordinate establishments. In Pegu the health of both the controlling and subordinate staff was satisfactory. The Chief Commissioner records with regret the cruel murder by Shan dacoits, in December 1878, of Mr. C. F. Nepean, Assistant Conservator of Forests, 1st grade, an officer of many years' standing and much experience in the department. It is supposed that the murder was planned under the idea that Mr. Nepean had in his custody a large sum of money. Three men were tried for the crime, convicted, and executed at Moulmein shortly afterwards.

Establishment.

25. During the year under review the attention of the Chief Commissioner was attracted to the anomalous condition of things under which more than half the Forest establishment was classed as temporary, although the greater portion was of an essentially permanent character. He therefore requested Mr. Ribbentrop to prepare and submit a scheme for dividing the so-called temporary establishment into what was strictly of a permanent, and strictly of a temporary, nature, and combining the former with the regular fixed establishment. Mr. Ribbentrop brought forward his proposals towards the end of the year 1878-79; but it was found that they offended in many respects against the principles laid down by the Financial Department; that they involved changes in the rates of pay already settled by the Government of India in the Forest Department; and that they introduced additions to the strength of the establishment for which there was no necessity, and it was accordingly impossible to approve of them. The scheme was then laid before a Committee which has recently concluded its sittings, and the Chief Commissioner hopes that he will be able in a short time to submit his recommendations for the sanction of the Government of India.

By order of the Chief Commissioner,

G. D. BURGESS,

Officiating Secretary.

REPORT

ON

THE FOREST ADMINISTRATION

OF

BRITISH BURMA

For the year 1878-79.

BY

Major W. J. SEATON, Conservator of Forests.

SECTION I.—SUMMARY.

Forest Legislation.

The consideration of the new Forest Act and draft rules noted in the previous year's report was postponed, pending the Inspector-General of Forests' expected deputation to the province.

New Forest Act for the province in abeyance.

2. An Act for the Preservation of Wild Elephants (Act VI. of 1879, the Elephant Preservation Act) received the assent of the Governor-General in Council on the 22nd March 1879, and came into force on 1st April 1879.

The Elephant Preservation Act.

1.—Area and Boundaries.

3. The boundaries of the reserves in the Prome, Sittang, and Shwe-gyeen divisions remain unaltered since last year's report.

Increase in area of State reserves, Pegu circle.

In the Tharrawaddy division 594 square miles were added, of which 150 square miles are subject to *toungya* cultivation.

The Western or Bassein division still remains without reserves.

Of the 594 square miles of reserves added during the year in the Tharrawaddy division, 442 square miles were included in last year's report as "sanctioned since the 1st April 1878," and 152 square miles were alluded to as "proposed for reservation."

The demarcation of the *teak* forests of the Tharrawaddy division may be considered as complete.

4. Early in the year, the local Government sanctioned the demarcation as State reserves of seven reserves, aggregating 146 square miles, in the Attaran forest district, and of one reserve of 20 square miles in the Thoungyeen forest district, or a total area of 166 square miles, thereby increasing the area of State reserves in the Tenasserim circle from 84·75 square miles to 251 square miles.

Increase in area of State reserves in the Tenasserim circle.

5. At the close of the year under review, the total area of sanctioned State reserves in the province was 1,410 square miles, or an increase of 760 square miles during the year, *viz.*, in the Pegu circle, 594 square miles; Tenasserim circle, 166 square miles.

Total increase in the area of State reserves in the province.

6. The newly-sanctioned reserves in the Tenasserim circle were surveyed and selected by the Department in the dry season of 1877, and reported on by the Civil Officer (appointed Forest Settlement Officer) in 1877-78.

Newly-sanctioned reserves selected in the Tenasserim circle.

7. The boundaries of all the above-mentioned newly-sanctioned reserves in both circles were finally demarcated in accordance with the procedure laid down in Rule XIV. of the Forest Rules of 1865.

Final demarcation of boundaries in both circles.

8. The tracts of forest known as "ordinary reserves" in the Prome division, and sanctioned as such, have been reported upon by a specially-deputed Civil Officer, in company with the Divisional Officer, and proposals finally submitted for reservation as "State reserves."

Proposals for reservation in Pegu circle.

9. Large tracts in the Sittang division have been examined preliminary to being considered by the Demarcation Staff. The Demarcation Staff was at work in the Khaboung valley, in the Sittang division; but no reserves were taken up, owing to the Civil Officer not being available until March.

Preliminary examination and selection of areas suitable for reservation in Pegu circle.

10. This work was continued in the Middle Thoungyeen and Yoonzaleen districts, and resulted in the selection of two reserves—the "Mekkanay Toungdan" and "Takawkyo" reserves—aggregating 90 square miles in the former district, and one pine forest reserve near Loomatee, of 20 square miles, in the latter district. Of the first-named reserve, 15 square miles were examined during the previous year. The work was interrupted for a while by the sudden and tragic death of Mr. Nepean, and, later in the season, by the prevalence of fever caused by the heavy rain which fell between the 8th and 17th April.

Preliminary survey and selection of areas suitable for reservation in Tenasserim circle.

11. No Civil Officer was specially deputed as Forest Settlement Officer during the past season. The proposed pine forest reserve near Loomatee was visited by the Assistant Commissioner in charge, Salween district, and reported as likely to affect Karen *toungya* cultivation, and involve claims to compensation. The proposals, when finally submitted, were negatived by the Chief Commissioner.

Forest settlement work in Tenasserim circle.

The Nat-choung (proposed) reserve, Attaran forest district, was visited by the Deputy Commissioner, Amherst district, and its reservation agreed to, subject to the alterations of the east and south boundaries as proposed by the Conservator.

2.—Protection and Improvement.

12. Fire-protection was successful in the Prome division, 67 acres out of 2,500 only being burnt in the Choung-zouk reserve. In the Tharrawaddy division, the Mokka Beeling, Bobon, Myodwin, and Kangyee reserves, and the scattered teak *toungyas*, were successfully protected; while portions of the Bwet and Nyanlay reserves were burnt.

Fire-protection in Pegu circle.

In the Rangoon division, the Kyet-phyoo-gan plantation was again burnt throughout, as also 25 acres of 1872 plantation at Magayee. The remainder of the Magayee plantations was successfully protected.

In the Sittang division, fire was successfully kept out of the Pyoon-khyoung and Yainay reserves. The entire area successfully protected in the Pegu circle was 39,552 acres, which exhibits an increase of 1,988 acres above the results of the previous years.

13. The total expenditure incurred in these operations in the Pegu circle was Rs. 8,907, or Rs. 744 in excess of that of the previous year.

Total expenditure on fire-tracing in Pegu circle.

14. Measures for protection against fire were limited to the Sinzway, Wamoo, Beeling Maiwyne, Mainanway, and Oankan-gyee reserves and portions of the Kaheeloo and Dalee; and proved successful in every instance but that of the Wamoo reserve, which was set on fire by an individual surreptitiously collecting honey.

Protection of reserves against fire in the Tenasserim circle.

The entire area thus protected was 31,770 acres, and exhibits an increase of about 1,136 acres on the results of the previous year's work.

15. The preparation of permanent fire-traces from 15 to 50 feet in width, and aggregating 13 miles in length, in the Sinzway reserve, considerably increased the expenditure under this head during the past year. The total expenditure over all the reserves amounted to Rs. 968-9-0, equivalent to an increase of Rs. 500-5-0 as compared with the previous year's expenditure, but compensated for by the additional security afforded to the most valuable of the reserves.

Cost of fire-tracing.

16. The results of the year shew that, out of a total area of 74,867 acres fire-traced, 71,822 acres were successfully protected at a cost of Rs. 9,875-9-0.

Summary of results of fire-protection in both circles.

17. In the Pegu circle, 375 acres of teak *toungyas* were cultivated in the Tharrawaddy division at a cost of about Rs. 5-8 an acre, and 24 *toungyas* prepared for cultivation in the Prome division. In the Tenasserim circle, the area cultivated under this system was 171 acres, at a total cost of Rs. 1,022-4-6.

Improvement of State reserves under the *toungya* cultivation system in Pegu and Tenasserim circles.

18. Thirty-eight acres in Rangoon division were prepared for teak cultivation by direct Government agency; but the sowing proved a failure, owing to bad quality of seed. Weeding was carried on in the Prome, Tharrawaddy, Rangoon, and Sittang plantations, at a cost of Rs. 1,643-2-0.

Regular teak plantations, Pegu circle.

19. There are no regular teak plantations in this circle, the small areas planted in 1856 at Thingan-nyee-noung on the Winyoo, and at Shwegoon and Koloon on the Salween, being only experimental plantations, which serve to shew the growth of teak in such

Experimental teak plantations, Tenasserim circle.

sites, and to which no additions have ever been made. The Thingan-nyee-noung plantation was thinned and freed of creepers under the supervision of Mr. Aplin, and a similar operation will be carried out in the Shwe-goon plantation.

Artificial aid to reproduction of teak in fire-traced reserves in Pegu and Tenasserim circles.

20. In the Tharrawaddy division, 31 baskets teak-seed were dibbled in in favourable localities, but with very indifferent results; and in the Prome division, a similar experiment with 130 baskets teak-seed proved a complete failure.

21. In the Tenasserim circle, teak seedlings were successfully raised in the Sinzway reserve along the four lines, 20 feet wide and aggregating about two miles in length, originally cleared by Mr. Bingham.

Experimental cultivation of exotic and other trees in Pegu and Tenasserim circles.

22. In the Pegu circle, the *Ficus elastica* plants at Magayee are much reduced in number, owing to last year's drought. Of the vanilla plants, 13 are in existence; and of the 13 mahogany seedlings, eight plants have survived. *Pithecolobium saman* has been distributed throughout the Pegu circle, and from all quarters is reported to have grown luxuriantly.

In the Magayee plantation, 200 plants have been raised.

23. In the Tenasserim circle, the four mahogany trees planted out in 1875 near a monastery at the foot of the Toungwine range, near Moulmein, continue to thrive, the maximum and minimum heights of the trees being 17 feet and seven feet respectively.

At Mergui, eight Para India-rubber trees (*Hevea braziliensis*), the survivors of the batch of seedlings received from Dr. King in 1877, continue to do well in the office compound, and vary in height from eight feet to 25 feet.

A quantity of seed of the Ceara India-rubber tree (*Manihot glaziovii*) was received during the latter part of the season from the Botanical Gardens, Peridéniya, Ceylon, and, at the request of Dr. Thwaites, an intelligent lad was deputed to Ceylon to receive instruction in the cultivation of India-rubber plants and to take charge of a large number of cuttings of *Hevea braziliensis*, raised expressly for this province, and some plants of *Castilloa elastica* (*Manihot glaziovii*), nutmeg, cacao, and vanilla. For the reception of these plants and further experiments, a few acres have been prepared out of an area of 48 acres selected for the purpose near Mergui, where requisite supervision is always forthcoming on the part of Mr. Sutherland, the Overseer.

Breaches of forest rules in the Pegu circle.

24. In the Pegu circle, 19 prosecutions against 63 persons were instituted, and convictions obtained against 59.

Breaches of forest rules in the Tenasserim circle.

25. In the Tenasserim circle, one case of breach of Rule XIII. was reported in the Wamoo reserve; but the prosecution failed for want of evidence. In the unreserved forests, six cases were discovered of breach of forest rules, in which 25 individuals were involved; and of these, convictions have as yet been reported in three cases only. These cases all related to removal of timber of reserved kinds and forest produce without permits.

The Deputy Conservator of Forests in charge, Kadoe Timber Revenue-station, dealt with 68 cases, of which 51 related to timber in transit or breaches of the Kadoe rules, and one to breach of forest rules; while the remainder came under the Indian Penal Code.

3.—Yield and Working.

Girdling operations in Pegu and Tenasserim circles.

26. In the Pegu circle, the Conservator's proposals for the girdling of 27,400 trees were sanctioned at too late a date to admit of the work being begun this year. In the Tenasserim circle, sanction was received for the girdling of 2,000 teak trees in the Meplay and Lower Thoungyeen forest districts; but the late date when orders came to hand, and prevalence of fever after heavy rain in April, precluded more than 934 trees being killed in the Meplay district.

In addition to the above, 506 trees of other kinds were girdled or felled to improve the growth of teak trees and facilitate reproduction, and 118 creepers were cut.

Cost of girdling.

The direct expenditure on the work amounted to Rs. 279-12-6.

4.—Unreserved Forests.

Area and boundaries.

27. With the exception of the decrease in area caused by 594 square miles in the Pegu circle and 166 square miles in the Tenasserim circle being added to the State reserves, no alteration has to be recorded in the area or boundaries of the unreserved forests.

Requirements of the population.

28. Under existing orders, free permits have been limited to timber of the reserved kinds (other than teak, padouk, thitka, and thitkadoe) within a distance of five miles from the residence of parties requiring it.

As was anticipated, there has been, nevertheless, a great increase in the issue of free permits, the large stocks of timber in possession of private individuals since the introduction of the free permit system having greatly diminished.

29. No alterations have to be recorded in the area of leased or private forests, which are limited to the Attaran and Pandaw 30 years' holdings in the Tenasserim circle, which all lapse in 1896.

Leased forests.

30. In the Pegu circle, rest-houses at Kadin-nga-zin and Tounglay, in the Prome division, were completed. In the Tharrawaddy and Rangoon divisions, the bungalows at Poungday and Pegu were nearly completed, and the old Kyet-phyoo-gan plantation bungalow was removed to Hlaigoo.

Communications and buildings in Pegu and Tenasserim circles.

31. In the Tenasserim circle, the construction of the forest rest-house at Hpapoon, West Salween sub-division, was completed during the year. A small guard-house has been erected at the revenue-station above Tavoy; and a substantial shed has also been built for the storing of paddy for the depôt elephants, Moulmein.

5.—*Yield and Working of the Forests.*

Teak and other timber removed from the forests by Government contractors.

32. During the year, the following was the total quantity of timber brought to depôts in the Pegu and Tenasserim circles by Government agency and forest contractors :—

		Logs and pieces.	*Tons.*
Pegu circle :	teak	17,530	14,637
Tenasserim do :	do.	8,328	6,893
	Total of teak timber ..	25,858	21,530
Pegu circle : other woods ..	.. ..	1,728	1,452
Do. :	scantling	978	20
Tenasserim circle :	do.	598	317
Do. :	sleepers of other woods ..	6,364	430
	Total of other woods ..	9,668	2,219
Grand total of teak and other woods extracted by Government agency and direct contractors ..		35,526	23,749

33. If to the above 14,637 tons of teak extracted by Government contractors in Pegu circle are added 212 tons of inferior teak and 91 dead and fallen trees, equivalent to 25 tons, extracted by the State Railway and private parties, the total quantity of teak removed from the forests in the Pegu circle during the year will be found to be 14,874 tons.

Teak extracted by purchasers added to outturn of Pegu circle.

34. From the Attaran and Pandaw forests, held under 30 years' leases, the holders extracted 2,444 pieces, equivalent to 996 tons, of teak.

Teak timber from leased forests in Tenasserim circle.

35. The total outturn of teak from all sources was as follows :—

Total outturn of teak from the forests in the Pegu and Tenasserim circles.

	Tons.
Pegu circle	14,874
Tenasserim circle	7,889
Total ..	22,763

36. In the Pegu circle, trade permits were issued for 25,448 trees, and in the Tenasserim circle for 2,654 trees, making a grand total of 28,102 trees. Free permits for 46,972 trees in the Pegu circle and 2,468 trees in the Tenasserim circle were also issued during the year.

Timber of reserved kinds extracted from the forests under trade and free permits.

The total quantity of timber of woods of other kinds extracted by both Government agency and forest contractors was as follows :—

Total yield of timber of reserved kinds other than teak.

	Tons.
Pegu circle	1,472
Tenasserim circle	747
Total ..	2,219

37. In the Pegu circle, 3,242 logs of teak timber were neaped in transit, consequent upon the early falling of the water in many forest streams.

Timber neaped in transit, Pegu circle.

38. The total expenditure charged to cost of extraction of teak and other woods in Pegu circle was Rs. 2,33,198-10-11; and in Tenasserim circle, Rs. 1,10,331-9-3. In Pegu circle, the rate per ton on teak was Rs. 18-7-0, and on other woods Rs. 15-7-11. In the Tenasserim circle, the rates in question were respectively Rs. 14-10-3 and Rs. 28-11-0 per ton. The cost of sleepers was Rs. 2-13 per sound sleeper delivered at Moulmein, or Rs. 40-8-0 per ton.

Cost of extraction.

Drift timber operations in Pegu and Tenasserim circles.

39. During the year, 11,531 logs of drift timber were salved departmentally in the Pegu circle, and 6,818 logs and pieces in the Tenasserim circle, making a total of altogether 18,349 logs collected and brought to depôts.

These figures, compared with those of 1877-78, exhibit an increase in both the Pegu and Tenasserim circle collections of 2,345 logs and 2,434 logs respectively.

In the Pegu circle, 9,295 logs were made over to claimants and 1,169 logs broke adrift during the high floods in October.

The collections in the Tenasserim circle include 566 logs and pieces, chiefly the latter, from the seashore. From this and previous years' collections, 1,038 logs of superior timber were made over to claimants.

Wood received at Central Depôt, Rangoon, including drift timber.

40. The receipts of the central depôt amount to 13,199 logs of teak, measuring 12,240 tons, and 1,230 logs of other kind, measuring 985 tons; whereas during the previous year the receipts were 21,768 tons of teak and 2,135 of other kinds. A further decrease in the outturn of teak may be expected as long as girdling operations are suspended.

Disposals at Central Depôt, Rangoon.

41. The disposals of the central depot amounted to 14,894 logs and 4,511 sleepers of teak, measuring 13,891 tons; and 1,155 logs of other kinds and 678 sleepers, measuring 955 tons, leaving a balance of 9,527 tons of teak and 125 tons of other woods, or 1,621 tons less than last year's balance.

Timber sales.

42. The total amount of timber sold by direct Government agency in the Pegu circle amounts to 13,982 tons of teak and 1,584 tons of other wood during 1878-79, against 20,282 tons of teak and 2,340 tons of other woods during 1877-78. In the Tenasserim circle, 9,126 tons of teak and 213 tons of timber of other kinds were sold by the Department; whereas during the previous year the quantities sold of teak and other woods were 12,179 tons and 266 tons respectively.

Prices realized.

43. The average prices realized per ton in the Central Depot, Rangoon, during the year were—

	Rs.	A.	P.
Mast-pieces	54	15	2
Yard ,, ...	32	0	6
Doogies, I.	44	0	2
,, II.	24	8	6
Hlawzas	33	9	6
Yattluts	40	10	0
Or for 1st class timber	55	0	0
,, 2nd ,, ,, ...	35	0	0

For timber of other kinds, in the Pegu circle, the following prices were realized per ton :—

	Rs.	A.	P.
Thitka	22	10	6
Padouk	56	8	2
Eng	10	15	0
Kanyin	17	15	6
Pyinkado	19	8	6

In the Tenasserim circle, the average prices realized on the sales of the year were Rs. 20-15-0 per ton of teak timber and Rs. 60-2-8 per ton of timber of other kinds,—the high average in the latter case being due to the larger proportion of padouk timber disposed of.

Conversion of timber in Tenasserim circle.

44. Operations were limited to the conversion of 361 teak logs in Moulmein for supplying 150 squares to the Gun-carriage Factory, Bombay, and 18 squares and 14 cubic feet scantling to the Government Consulting Architect, Madras.

Shipment of timber.

45. With the exception of the above-mentioned timber, and crooks for the Dockyard, Calcutta, as well as padouk for the Gun-carriage Department, Bombay, no shipments of converted timber were made in the Tenasserim circle during the year, except those of pyinkado and anan sleepers to Calcutta. From the Pegu circle, three sample logs of eng, thitka, and thitkadoe were shipped to Calcutta for the Opium Agent, Behar.

6.—Yield of the Forests beyond the Frontier.

Foreign timber reported at the Kadoe Timber Revenue-station.

46. The total quantity of foreign timber reported at the Kadoe Revenue-station during the year amounted to 125,433 logs, or 119,214 tons, of teak timber, which, compared with the previous year's arrivals, exhibit a decrease of 18,418 logs, or 29,835 tons, in the outturn of the foreign forests. Eight logs of timber of other kinds (*Cedrela toona*) were imported.

Timber cleared.

47. The number of logs cleared on payment of duty (seven per cent. *ad valorem*) was 142,696; and balance on hand at the close of the official year was 76,397 logs.

29. No alterations have to be recorded in the area of leased or private forests, which are limited to the Attaran and Pandaw 30 years' holdings in the Tenasserim circle, which all lapse in 1896.

Leased forests.

30. In the Pegu circle, rest-houses at Kadin-nga-zin and Tounglay, in the Prome division, were completed. In the Tharrawaddy and Rangoon divisions, the bungalows at Poungday and Pegu were nearly completed, and the old Kyet-phyoo-gan plantation bungalow was removed to Hlaigoo.

Communications and buildings in Pegu and Tenasserim circles.

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5.—*Yield and Working of the Forests.*

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The total quantity of timber of woods of other kinds extracted by both Government agency and forest contractors was as follows :—

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Disposals at Central Depôt, Rangoon.

41. The disposals of the central depôt amounted to 14,894 logs and 4,511 sleepers of teak, measuring 13,891 tons; and 1,155 logs of other kinds and 678 sleepers, measuring 955 tons, leaving a balance of 9,527 tons of teak and 125 tons of other woods, or 1,621 tons less than last year's balance.

Timber sales.

42. The total amount of timber sold by direct Government agency in the Pegu circle amounts to 13,982 tons of teak and 1,584 tons of other wood during 1878-79, against 20,282 tons of teak and 2,340 tons of other woods during 1877-78. In the Tenasserim circle, 9,126 tons of teak and 213 tons of timber of other kinds were sold by the Department; whereas during the previous year the quantities sold of teak and other woods were 12,179 tons and 266 tons respectively.

Prices realized.

43. The average prices realized per ton in the Central Depôt, Rangoon, during the year were—

	Rs.	A.	P.
Mast-pieces	54	15	2
Yard ,, ...	32	0	6
Doogies, I.	44	0	2
,, II.	24	3	6
Hlawzas	33	9	6
Yatthits..	40	10	0
Or for 1st class timber	55	0	0
,, 2nd ,, ,, ...	35	0	0

For timber of other kinds, in the Pegu circle, the following prices were realized per ton :—

	Rs.	A.	P.
Thitka	22	10	6
Padouk	56	8	2
Eng	10	15	0
Kanyin	17	15	6
Pyinkado	19	8	6

In the Tenasserim circle, the average prices realized on the sales of the year were Rs. 20-15-0 per ton of teak timber and Rs. 60-2-8 per ton of timber of other kinds,—the high average in the latter case being due to the larger proportion of padouk timber disposed of.

Conversion of timber in Tenasserim circle.

44. Operations were limited to the conversion of 361 teak logs in Moulmein for supplying 150 squares to the Gun-carriage Factory, Bombay, and 18 squares and 14 cubic feet scantling to the Government Consulting Architect, Madras.

Shipment of timber.

45. With the exception of the above-mentioned timber, and crooks for the Dockyard, Calcutta, as well as padouk for the Gun-carriage Department, Bombay, no shipments of converted timber were made in the Tenasserim circle during the year, except those of pyinkado and anan sleepers to Calcutta. From the Pegu circle, three sample logs of eng, thitka, and thitkadoe were shipped to Calcutta for the Opium Agent, Behar.

6.—Yield of the Forests beyond the Frontier.

Foreign timber reported at the Kadoe Timber Revenue-station.

46. The total quantity of foreign timber reported at the Kadoe Revenue-station during the year amounted to 125,433 logs, or 119,214 tons, of teak timber, which, compared with the previous year's arrivals, exhibit a decrease of 18,413 logs, or 29,835 tons, in the outturn of the foreign forests. Eight logs of timber of other kinds (*Cedrela toona*) were imported.

Timber cleared.

47. The number of logs cleared on payment of duty (seven per cent. *ad valorem*) was 142,696; and balance on hand at the close of the official year was 76,397 logs.

7.—*Financial Results.*

Receipts and expenditure.

48. The receipts and expenditure of the year, as exhibited in Form 49, were as follows:—

		Rs.
Pegu circle ..	Receipts	6,55,517
	Expenditure	4,94,542
	Shewing a surplus of	1,60,975
Tenasserim circle	Receipts	4,82,045
	Expenditure	2,23,858
	Exhibiting a surplus of	2,58,187
	Thereby making a total nett revenue of	4,19,162

Decrease in revenue, Pegu circle.

49. During the previous year—

	Rs.
The receipts amounted to	8,69,398
The expenditure to	5,03,984
Leaving a balance of	3,65,414
These figures show a falling off in gross revenue of ..	2,13,881
In nett revenue of	2,04,439

The falling off is due to the gradual exhaustion of the stock of girdled timber in the forests, and in some measure also to the low prices obtaining during the year for teak. The markets were overstocked, and the importations of foreign teak very large. The year was also an unfavourable one for the extraction of timber, as the rains were very late and the rise in the rivers was not of long duration.

Review of receipts, Pegu circle.

50. Revenue I*a*. exhibits a decrease of Rs. 2,47,069 as compared with previous year. Prices were very low during the last few months of the official year. Sales were accordingly limited, being 7,055 tons less than 1877-78. This alone represents a sum of two lakhs, and the difference may easily be accounted for by the low average of the year. Under ordinary conditions, the timber sold would have realized at least half a lakh more. Revenue I*c*. shews a small increase of Rs. 33 and I*e*. a decrease of Rs. 41. Revenue II*a*. shews a decrease of Rs. 11,583, due chiefly to the small extraction of refuse by Public Works Department and Railway, *viz.*, 237 tons, against 847 of the previous year.

Revenue II*b*. and *c*. shew increase of Rs. 829 and Rs. 374 respectively, chiefly by sale of firewood and bamboos in all divisions except Agency.

Revenue II*e*. exhibits a decrease of Rs. 5,275. This is owing to the falling off in the manufacture of cutch in the Prome and Tharrawaddy districts, both Civil and Forest Officers being of opinion that cutch-boiling should be stopped for several years to come.

Revenue III. shows an increase of Rs. 13,765, chiefly due to extensive operations in the Sittang, Western, and Agency divisions, large quantities of foreign timber having gone adrift during the floods of 1878.

Revenue V*a*. exhibits a decrease of Rs. 243; Revenue V*b*. an increase of Rs. 730; while V*c*. shews a large increase of Rs. 34,599. This is abnormal, and is owing to the credit to this head of value of elephants worked off by contractors to whom they had been loaned under orders of Comptroller-General.

Review of expenditure, Pegu circle.

51. Expenditure *A*.I*a*. shews an increase of Rs. 915. This, however, is owing to charges, amounting to Rs. 75,104, of 1877-78 being included in the year's expenditure. The actual timber charges of the year really fall short of the previous year by three-quarters of a lakh. This is owing to the large quantity of timber which failed to reach the main streams, owing to late rise of river, and could not be delivered and paid for at the Main Depôt, Rangoon.

A.I*c*., shews an increase of Rs. 450. This is the cost of bamboos cut for Mr. Routledge's paper experiment.

A.II. exhibits an increase of Rs. 2,054. This is explained by increased establishment at Shwe-gyeen, Yandoon, Ngathain-gyoung, and Taropmaw revenue-stations, for the collection of revenue on woods of other kinds.

A.III. exhibits an increase of Rs. 1,644,—a very moderate sum, considering the very large amount of drift timber salved in 1878-79 as compared with the previous year.

A.VI*a*., an increase of Rs. 3,265. Several animals had to be purchased to make up deficiencies in the Rangoon Depôt, and the Sittang and Tharrawaddy divisions. The expenditure incurred was, however, below the estimate of the year.

A.VI*b*., a small increase of Rs. 524, calls for no remark.

*A.*VIc. exhibits an increase of Rs. 1,319. Several boats had to be purchased for drift timber operations in the Western division, and cost of mathematical instruments supplied for use of the Sittang and Rangoon divisions; also a supply of iron buckets and tools for Magayee.

*A.*VII*a.* exhibits a decrease of Rs. 2,329, saving owing to the roads intended to be made in the Tharrawaddy, Rangoon, and Agency divisions not being constructed.

*A.*VII*b.* exhibits an increase of Rs. 5,845. This is owing to construction of offices at Padoung and Pegu, and extensive renewal of Agency Office at the Government Timber Depôt, Rangoon.

*A.*VII*c.* exhibits a small increase of Rs. 148.

*A.*VIII*a.* to *f.* exhibit a decrease of Rs. 18,780, chiefly under demarcation and limited operations at Magayee; also savings under fire-protection and other works.

*A.*IX*a.* shews increase of Rs. 562, being refund of duty levied erroneously on *koungmhoo* and refunded by order of local Government.

Under *A.*IX*b.* and *c.* there are savings of Rs. 31 and Rs. 1,715 respectively.

Under *B.* "Establishments," there is an increase of Rs. 1,744 in salaries of superior officers, owing to debit of Civil Officer's salary to this head, in protection, an increase of Rs. 673 being due to increment allotted to Foresters and Rangers.

Under *B.*II., "Travelling-allowances," there is on the whole a decrease of Rs. 4,210. The savings would not have been so large had the two Civil Officers been attached for six months of the year.

*B.*III., "Contingencies," exhibit a decrease of Rs. 1,410, chiefly under sub-head "Sundries."

Receipts in Tenasserim circle.

52. The almost total suspension of conversion operations, which tend to increase both receipts and expenditure, precludes any comparison between the past and previous years' receipts. A reference to para. 31 of previous year's Administration Report will shew also that the receipts were swelled by heavy outstandings on account of 1876-77.

The regular budget-estimate for the year was—

	Rs.
Receipts	5,36,250
Expenditure	2,44,058

It will be seen that the receipts fell short of the budget-estimate by Rs. 54,205. This is mainly due to a decrease under I*a.*, owing to the unsatisfactory state of the market precluding the sale of 2,000 logs of Thoungyeen timber, and to a decrease of about Rs. 13,000 under IV*a.* in the receipts of revenue on foreign timber.

Under II*a.*, there has been an increase of about Rs. 8,000, consequent on the large quantity of timber extracted under trade permits; and under III., an increase of about Rs. 3,000, the drift timber which was disposed of realizing more than was anticipated.

Expenditure, Tenasserim circle, as compared with budget-estimate.

53. The expenditure under *A.*I*a.* fell short of the budget-estimate by Rs. 87,749, owing to a smaller outturn than was anticipated from the forests, and to non-delivery of 6,000 pyinkadoe sleepers from the Salween forest contractors.

The non-receipt of the usual requisition from the Gun-carriage Department, Madras, for 100 tons padouk also occasioned a decrease of Rs. 6,000.

Under *A.*VIII*a.*, "Demarcation," there was an increase of about Rs. 1,000, the result of the heavier expenditure incurred in the clearing of lines in the Attaran reserves and in other incidental expenditure.

Under *B.*, the actual expenditure has been about Rs. 2,800 less than the budget-estimate, consequent on saving under the heads of "Salaries of superior officers" and "Travelling-allowances."

GENERAL REMARKS.

Health of controlling and executive forest establishment.

54. The health of the controlling and executive forest establishment of the Pegu circle was on the whole good during the year; but fever was very prevalent in the forests of the Tenasserim circle during the past dry season, and occasioned much sickness among both the executive and subordinate forest establishments.

Messrs. Bingham and Ward, as well as the Conservator, suffered much from fever while in the forests; and one case of fever terminated fatally among the peons of the temporary forest establishment.

The unhealthiness in question may be explained by the fact that rain fell in the Thoungyeen and other forest districts as late as January, and again early in April.

Changes in the executive forest establishment.

55. Mr. N. Hearle, Assistant Conservator of Forests, appointed by the Secretary of State, arrived in Rangoon on 26th December, and was posted to the Rangoon division.

Messrs. A. Weston and F. E. Huddleston, appointed as Sub-Assistant Conservators of Forests on probation, arrived in Burma on 7th November and 17th December respectively. The former was posted to the Sittang division, and the latter to the Demarcation Staff.

Mr. Nisbet, Assistant Conservator of Forests, was absent on privilege leave from the 19th September to the 22nd November 1878. Mr. G. Stratford, Sub-Assistant Conservator of Forests, relieved Mr. Nisbet of the charge of the Shwe-gyeen sub-division; and the latter, on his return, was posted temporarily to the Agency branch of the Conservator's Office, and charged with special duties in connection with drift timber.

56. In the Tenasserim circle, the Department lost the services of an officer of considerable experience, and thoroughly versed in plantation and survey work, in the death of Mr. C. F. Nepean, Assistant Conservator, 1st grade, who was murdered by Karen dacoits on the night of the 24th December, while encamped on the south bank of the Meplay river, at the crossing of the Meerawaddy and Shway-awba path.

The attack was made under the misapprehension that he had with him a considerable amount of Government money, whereas he had not at the time more than a sum of Rs. 62-1-6. But for his being severely wounded at the outset, and the cowardice of his subordinates, the attack might have been easily repelled, as only three men were actually engaged in it.

Mr. F. W. Thellusson, Assistant Conservator, 3rd grade, appointed by the Secretary of State for India in (Revenue—Forests) No. 38F. of 31st October 1878, who reported his arrival in Burma on 26th December 1878, was posted to the Tenasserim circle in Secretary to Chief Commissioner's letter No. 26-27F. of 10th January 1879.

Mr. M. H. Ferrars, Deputy Conservator of Forests, 3rd grade, was transferred to the Educational Department in Government of India Home Department notification No. 114 of 2nd May 1878.

East and West Salween sub-divisions, Tenasserim circle.

In December, Mr. H. B. Ward, Sub-Assistant Conservator, was nominated to the charge of the West Salween sub-division; and at the close of the year, Mr. C. F. Bingham was appointed to the charge of the East Salween sub-division in the place of the late Mr. C. F. Nepean.

Subordinate forest establishment, Tenasserim circle.

57. The only changes which have to be recorded in the subordinate establishment are the discharge of Forest Ranger Shwe Oung on account of ill-health, and dismissal of Forest Ranger Shwe Yoong for cowardice on the occasion of Mr. Nepean's murder. Moung Nyoglay, a Burman already well tested in forest work, was appointed in the place of the former.

Conservator's tours in Pegu circle.

58. In April and part of May 1878, Mr. Ribbentrop, Conservator of Forests, Pegu circle, inspected the Toungoo and Shwe-gyeen divisions. In June, he visited Moulmein to discuss the Forest Bill with the Conservator, Tenasserim circle. In July, Mr Ribbentrop proceeded to Prome to attend a Committee on the Forest Bill, and also visited Beeling obstruction and Kyet-phyoo-gan plantation. In August, he again visited Prome in connection with work of Tharrawaddy division, and again in September. The future head-quarters of Tharrawaddy were inspected in October; and in November the Conservator proceeded to Shwe-gyeen and Toungoo, inspecting the forests of both divisions, which occupied all November and December. In January 1879, the Conservator crossed the Yoma from the Tharrawaddy division and proceeded to Prome, inspecting forest reserves in the way. In February also he inspected the work in progress in the reserves of the Tharrawaddy division; and in March 1879 proceeded into the Sittang forests to inspect work of Demarcation Staff, reaching Toungoo on 31st March 1879.

Tours of the Conservator of Forests, Tenasserim circle.

59. The Conservator visited Mergui, South Tenasserim division, in September, and inspected the forest office, and also the Nat choung forest, in the Attaran district, in October, the Sinzway and Kaheeloo reserves, in the Yoonzaleen district, and Pandaw forest in December. The Mekkanay and Htoenoo forest districts were visited by the Conservator in January and February. On that occasion also the Donat range was crossed in Two places,—by the Moolayeet peak from the Megla stream and the Ta-oo plateau into the ta-oo, a feeder of the Megla. From Meerawaddie, on the Thoungyeen, to the Moolayeet peak and Assone, on the Houndraw river, the journey was performed in company with Colonel Beddome, Conservator of Forests, Madras. The Thoungyeen district was again visited by the Conservator in March and April in connection with girdling operations.

Services of divisional and other officers.

60. As a separate special report has to be yearly submitted on the services, &c., of officers, it will suffice to mention that Divisional Officers and those in charge of central and other offices continued to give satisfaction.

SECTION II.—RESERVED FORESTS.

PEGU CIRCLE.

A.—PROME DIVISION.

1.—Area and boundaries.

61. The area of the reserves in this division remains unaltered.

Proposals for conversion of old ordinary reserves into State reserves, with slightly altered boundary.

The outer line of the North, Middle, and South Nawing block, already sanctioned as *ordinary* reserves and aggregating 119 square miles, was again inspected with a view to re-submitting the same tracts for sanction as *State* reserves, under the designation of the "Nawing Yoma Reserve." This proposed reserve will also include the contiguous tracts known as the Wapyoo, Meedo, Thitwa, Singoung, Pwotkya, Thapan, Loothay, Loobone, Bamboung, Oopaulangyee, Oopaulangalay, and Yeatho State reserves, aggregating 31·4 square miles. The line in question was examined by the Divisional Officer and Mr. A. O. Brown, Assistant Commissioner, and proposals have been submitted by them, which will exclude a small portion of the Thitwa, Singoung, and Pwotkya reserves, so as to allow *toungya*-grounds for the villagers of Singoung and Pwotkya, and for the Karens of Oungnee tay, Shwe Hmone tay, Myat Toon tay, Nan Shay tay, and Naydoon tay.

The Thayetmyo East Yoma block.

62. The old *ordinary* reserve, called the "Thayetmyo East Yoma Block," of 125 square miles, was similarly examined by Captain Cresswell, Assistant Commissioner, and the proprosals for its conversion into a State reserve have been submitted.

Renewal of boundary-marks.

63. Some of the boundary-mounds round the Simmisway Fuel Reserve, the Thayet choung, Nyoung-bin-det, and Choungzouk teak-reserves have been re-constructed, and additional ones made where necessary.

Modification of frontier line.

64. The frontier line between British Burma and Upper Burma was marked out by Lieut. R. O. Lloyd, R.E., by a blazed line from Tat-gone to the Yoma, and a few pillars were erected. Two villages, supposed hitherto to belong to Upper Burma, were found to be within British territory, and consequently within the Thayetmyo Yoma block (proposed) reserve. One of these villages (Shwe-loung), chiefly inhabited by escaped dacoits, was immediately deserted. The other one, inhabited by six Karen families, still remains within the reserve.

2.—Protection and Improvement.

Artificial aid to reproduction of teak.

65. In the Choung-zouk reserve, 130 baskets of teak-seed were dibbled in over an area of about 600 acres, at a cost of Rs. 90; but the result proved a failure, the seed germinating fairly but the young plants succumbing to excess of shade.

Teak *toungya* plantations.

66. The sowings of 1877-78 were weeded, at a cost of Rs. 81-8; and 24 *toungyas* for teak cultivation have been cleared and burnt.

Communications and buildings.

67. The rest-houses at Kadin-nga-zin and Tounglay, the construction of which was commenced during the previous year, were completed at a cost of Rs. 813-12-0. The office-buildings at Prome were earth-oiled for Rs. 92-8-0, and sundry repairs executed for Rs. 162-15-0. The elephant-shed was roofed, and the land around it defined with mounds and posts, at a cost of Rs. 172.

Breaches of forest rules.

68. No prosecutions for breaches of the forest rules within the reserves were instituted.

Successful fire-protection of the Prome reserves.

69. The Prome town teak plantation was again successfully protected from fire, at a cost of Rs. 35. In the Choung-zouk reserve, an attempt to keep fire out of an area of about 2,500 acres may be regarded as a success. Three fires occurred, by which about 70 acres only were burnt. The first two fires were incendiary, and suspicion rests on a gang of dacoits, who were afterwards discovered to have been living in the reserve about two miles from the fire-protected tract. The third fire, which was the most considerable, spread from a *toungya* which was being burnt for teak cultivation. Fortunately, none of the portions where forest improvement operations have been carried out were burnt. In fire-tracing this tract no regular fire-paths were cut, but parallel lines three feet broad and 150 feet apart swept clear of leaves, and the intervening jungle burnt. The cost amounted to Rs. 374-8-0, or two annas eight pies per acre actually protected. Of this sum, Rs. 258-8-0 has been charged in the accounts of the year under report, and the remainder in the accounts of 1879-80.

B.—THARRAWADDY DIVISION.

1.—Area and boundaries.

Additional reserves sanctioned.

70. During the year under review, the following reserves have been sanctioned:—

Mokka Beeling	.. 120 square miles, of which	80 are subject to *toungyas*.	
Toung Gamoung and Minhla,	140 "	47 "	"
Mimboo Boben	.. 130 "	25 "	"
Shwe-lay	.. 52 "	12 "	"
Atouk-kyaw	.. 7		
Thakolan	1		
Toungnyo Yoma	.. 138 square miles, of which	86 are subject to *toungyas*.	
Toungnyo extension	.. 2		
Tapan	.. 4		
	594 square miles, of which	150 are subject to *toungyas*.	

Teak reservation in Tharrawaddy completed.

71. At present it is not contemplated to propose any additional reserves in the Tharrawaddy division. It will, however, be necessary at some future date, in order to maintain a supply of fuel for the river steamers, and a supply of eng timber for consumption in the towns and villages on the banks of the Tharrawaddy, to take up a large reserve somewhere near Taropmaw.

Demarcation of boundaries.

72. The demarcation on the ground of the whole of this is now complete, the boundaries being defined by the usual stone-heaps or earth-mounds, with a post in the centre at intervals and a blazed line, or, in the case of the older reserves, by boards nailed on trees along the line. The expenditure throughout the year on demarcation was Rs. 4,554-9-7.

2.—Protection and Improvement.

Teak *toungya* plantation in Mokka Beeling reserve.

73. In the Mokka Beeling reserves, 102·25 acres were planted, at a cost of Rs. 523-5-0, inclusive of the cost of the seed supplied by Government. An epidemic occurred among the Karen cultivators during the rains, which scattered them in all directions. They were only gradually collected together towards the end of the rains, and the state of the plantations was consequently not so satisfactory as it has been in previous years, there being on an average only 285 plants per acre. In the Choungwah reserve, 25·5 acres were planted, at a cost of Rs. 202-8-0, including taxes; and in the Gway-douk-san reserve, 7½ acres, at a cost of Rs. 46-14-0. The countings gave 541 and 505 plants to the acre respectively.

In the Kan-gyee reserve, 54·25 acres were cultivated, at a cost of Rs. 414-2 exclusive of taxes, and shewed on an average 564 plants per acre. An experimental yah of one acre was cut and planted with 206 teak plants in the Nyanlay reserve, at a cost of Rs. 2-0-11.

In the Thongzai reserve, 34·50 acres were planted by the Karens of To-dee tay, at a cost of Rs. 321-1-0. This block gave at the end of the season 776 seedlings per acre, which shews that the Karens worked very well. It is a pity they are not more numerous in this part.

In the Bwet reserve, 150 acres were cultivated by the villagers of Yeabouktsan, at a cost, including taxes, of Rs. 520. They did not work well, and the result is only about 100 seedlings to the acre.

The total area cultivated in the Tharrawaddy division this year is 375 acres, at a cost of about Rs. 5-8-0 per acre.

The *toungya* plantations of the two previous years were cleared at a cost of Rs. 667-12-2.

Total area of teak *toungya* plantations.

74. The following list shews the total area of teak plantations of the division cultivated on the *toungya* system:—

Reserves.	Success.	Partial success or failure.	Total.
Mokka Beeling	780·25	14	794·25
Boben Choungwah	126·50	15	141·50
Kan-gyee	54·25	10	64·25
Thit-cho	..	19	19
Bwet	133	150	283
Toung, Gamoung, Minhla	232	..	232
Thongzai	92·5	..	92·5
Toungnyo Yoma	..	15	15
Shwe-lay	..	11	11
Nyanlay	1	..	1
Total ..	1,419·5	234	1,653·5

75. Artificial aid to reproduction, consisting in dibbling teak-seed in places where dibbling had failed during the previous year, was carried on in the Kan-gyee and Bwet reserves, at a cost of Rs. 259-1-0, with moderate success in the former and without any definite results in the latter.

Artificial aid to reproduction of teak in Kan-gyee and Bwet reserves.

76. The stripes in Nyanlay and Kan-gyee reserves, sown in 1876-77, were weeded and cleared at a cost of Rs. 114-12-0. In the former 3,295, and in the latter 34,130, teak-seedlings were set free.

Weeding operations in areas selected for improvement.

77. A bungalow for the officer in charge, Northern sub-division, has been nearly completed at Poungday, and the construction of a rest-house at Way finished, at a cost of Rs. 243-9-6.

Communications and buildings.

78. Attempts were made to protect several reserves and patches of teak *toungya* plantations from fire, with the following results :—

Protection from fire.

(*a*) *Mokka Beeling Reserve.*—This reserve, with an adjoining area of 100 acres, has been protected successfully from fire, at a cost of Rs. 93-4, or one anna per acre.

Mokka Beeling.

(*b*) *Boben.*—No portion of this reserve was burnt. The total cost of the work to the end of the season was Rs. 194-14-3, being Rs. 80 less than that incurred last year. This saving was effected by only clearing a path 15 to 20 feet wide round the reserve, instead of 40 to 50, as cleared in 1878. The cost per acre protected amounted to 4½ annas.

Boben.

(*c*) *Myodwin.*—This small plantation remained unburnt. The expenditure incurred in protecting it amounted to Rs. 33-13-0.

Myodwin.

(*d*) *Bwet.*—The attempts to prevent fires from entering this reserve failed, and five fires are reported to have occurred. The first fire, spreading over 3½ acres, was caused by a high wind which arose while the outer trace was being burnt, and carried sparks from the trace into the reserve. Fire No. 2, it is admitted, was originated by some of the coolies engaged in clearing the outer trace. Four of the men went into the reserve without permission with lighted torches of bamboo to suffocate some bees and remove the honey. There is little or no doubt that sparks from one of the torches ignited the leaves, and some 70 acres were burnt before the fire was extinguished. The other three fires, spreading over an area of 880 acres, all originated inside the reserve, and can only be attributed to hunters firing the jungle in search of game. No system of fire-tracing can, of course, guard against wilful incendiarism. The total amount expended in clearing the trace, watching and extinguishing fires inside the reserve, was Rs. 667-14-0.

Bwet.

(*e*) *Kan-gyee.*—Successfully protected from fire, at a cost of Rs. 1,043-9-1. The system adopted was the same as last year: the jungle, for a width of 300 feet upon the outer trace and the one leading through the middle of the reserve, was cut and fired, and as many as possible of the dead trees burnt. The traces were patrolled during the day, and at times during the night.

Kan-gyee.

(*f*) *Nyanlay.*—Fire entered this reserve before the outer trace had been burnt, and spread over some 600 acres before it was beaten out. Great difficulty was experienced in hiring coolies for the work, as rice could not be obtained in the hills and had to be purchased and carried out for the men by Government; and in addition, there was a greaty scarcity of water. A sum of Rs. 1,055-4 was expended in clearing the outer fire-trace, in extinguishing the fires, and in protecting the remainder of the reserve (5,240 acres).

Nyanlay.

(*g*) The scattered teak *toungya* plantations, covering an area of 388 acres, with the exception of three acres, were all successfully protected from fire, at a cost of Rs. 424-10-10.

Scattered plantations.

Arrangements were made as usual with the headmen of the villages, who had originally planted up the areas, to fire-trace and watch the plantations.

C.—RANGOON DIVISION.

1.—Area and boundaries.

79. The Magayee reserve, of 20 square miles, sanctioned in June 1877, was gazetted in June 1878, but was included in last year's report.

Additional reserve gazetted.

80. The boundaries of all the reserves of this division have been examined, and are reported as being in fairly good order.

Inspection of reserve boundaries.

2.—Protection and Improvement.

Teak planting by direct agency.

81. In the Magayee reserve, 38 acres were sown with teak-seed for the plantation operations of the year. Twenty-five acres more had been felled, but, owing to the absence of labour, could not be cleared in time to permit of sowing. The total cost was Rs. 918-9-2. Over 108 acres felling took place for the sowing of the rains of 1879.

The 1877 plantation of 273 acres was weeded three times during the rains, and blanks filled up, at a cost of Rs. 728-4-10.

Experimental cultivation of exotic trees.

82. One hundred and twenty-three *Ficus elastica* plants only remain, many having succumbed to last year's drought. Mr. Carter reports that it is doubtful if *Ficus elastica* will succeed at Magayee without being watered during the hot months; and this is out of the question, owing to the expense that would be entailed. Thirteen vanilla plants and eight mahogany are in the experimental garden, and seemingly healthy. Two-hundred plants of the *Pithecolobium saman* are in the nursery, and will be planted out along the road-sides during the ensuing rains.

Communications and buildings.

83. The removal of the Kyet-phyoo-gan bungalow to Hlaigoo cost Rs. 508-14-9; and the revenue guard-house at Awine was completed for Rs. 253-10-0. Repairs to the buildings at Magayee plantation and Zoungtoo were executed at a cost of Rs. 107. The forest office at Pegu is in course of construction.

Construction of roads.

84. The main road designed to connect the Magayee plantations with the supplementary railway roads was carried on, and has nearly reached Diedok-kwen on the Railway. This is an important work, as, when finished, it will re-open direct cart communication between Okkan and the other villages west of the Railway with the plantations at Magayee and the villages beyond. This means of communication has been closed since cart-traffic on the Prome road was stopped; and this has been one of the main reasons of the emigration of the Shan settlers from Magayee, as they had no longer the means of carrying their vegetable products to market.

Blasting operations.

85. Obstructions in the Khadat choung have been removed by blasting, at a cost of Rs. 742-7-0.

Protection of Kyet-phyoo-gan plantation unsuccessful.

86. The measures undertaken to protect the Kyet-phyoo-gan plantation again proved unsuccessful, a fire occurring on the 30th March and another on the 2nd April. The first of these fires is reported as having its origin in the carelessness of the contractor engaged to watch and keep the fire-traces clean. He set fire to a pile of leaves, &c., on the fire-trace while a high wind was blowing, which carried sparks into the plantation. Mr. Huddleston was soon on the spot, but found the contractor and his coolies had decamped, apparently from fear. With great difficulty, a few men were obtained from the village; but all attempts at checking the conflagration by means of temporary fire-traces proved futile, owing to the strength of the wind; and it was not till the night of the 31st March, when about half the plantation had been burnt, that its progress was definitely stopped. The second fire broke out in the afternoon of the 2nd April, and, from its having commenced in the opposite quarter of the plantation, its origin is attributed to incendiarism. Scarcely any coolies could be obtained by Messrs. Hearle and Huddleston, who were both on the ground, and by noon of the following day the fire had spread over the remaining half of the plantation. A special report is about to be submitted as soon as the precise damage has been ascertained; but it is evident that until this plantation is supplied with internal fire-traces (a work necessitating heavy additional expenditure), conflagrations of so sweeping an extent may always be apprehended.

Protection of Magayee plantation

87. About 25 acres of 1872 plantation, Magayee, were also burnt, fire breaking out in it on two occasions. The origin is reported to be incendiarism.

The length of the fire-trace at Magayee is 134,879 feet, or upwards of 25½ miles; and its breadth, 50 feet. The cost of cutting it was Rs. 1,517-0-8, or about Rs. 60 per mile. The cost of burning the surrounding jungle and entertaining watchers was Rs. 2,644.

Great difficulty was experienced in procuring the necessary labour for the work, so much having to be done in so short a time. It is easy to keep up a gang of coolies when the number required is pretty uniform throughout the year; but it is otherwise when the number fluctuates as it does at Magayee, the strength of the coolie establishment having occasionally to be suddenly and temporarily increased.

D.—SITTANG DIVISION.

1.—Area and Boundaries.

Proposed reserve.

88. No increase has to be recorded in the area of reserved forests in this division during the year; but the Divisional Officer has examined the basin of the Swa river, principally the localities drained by the Thine and Yainay, and reported on several tracts suitable for forest reserves.

Similar tracts on the Men-yai, Myohla, and Bimbyai streams have been reported upon, and only require a little more detailed examination of certain points preparatory to definite proposals being submitted. If the executive strength of the division during the ensuing season permit of it, this examination, with necessary proposals, may be undertaken by the Divisional Staff; if not, then they will be handed over to the Demarcation Staff for completion and submission.

The Demarcation Staff has been engaged in the valley of the Khaboung during the season. Proposals for one reserve, the Bhondoung, are now before the civil authorities, but much still remains to be done on the Khaboung.

2.—Protection and Improvement.

89. In the Yainay reserve, the area of eight acres sown in an old *toungya* clearing was examined and found very unequally stocked; portions being very good, and others very bad. There is too little population in the neighbourhood to get labour for this system of working. A road up the valley of the Swa would be a great benefit.

Teak-planting by direct agency in the Yainay reserve.

90. To free and assist the growth of young teak in this reserve, a gang of coolies under Mr. A. Weston, Sub-Assistant Conservator of Forests, was employed in girdling and felling trees of other kinds, and clearing away jungle and creepers that threatened to choke the young trees.

Clearing young teak in the Yainay reserve.

91. A similar work was carried out in the Pyoon choung plantation during the rains on such portions as seemed to require it.

Pyoon choung plantation.

92. A bag of *Pithecolobium saman* (seed) was sown in the Pyoon choung reserve, and the young plants are reported as ready for transplanting during the coming rains.

Experimental cultivation of exotic trees.

93. The expenditure of the year 1878-79 amounted to—

Cinchona plantation at Thantoungyee.

	Rs.	A.	P.
Establishment	960	0	0
Coolies	3,782	1	5
Purchase of dhâs and spades..	37	0	0
Carriage of bark to Rangoon,.	21	0	0
Total ..	4,800	1	5

A saving of Rs. 900 occurred in consequence of the resignation of five apprentices, at Rs. 15; and there was a reduction in the number of coolies. The plantation during the year was increased by a little less than an acre only; and in this 3,250 succirubra were planted. Blanks were filled up in the plantations of 1871, 1873, 1874, 1875, 1876, 1877; and in these, 840 calisaya and 14,000 succirubra plants were expended.

Of the sowings of 1876, 10,950 succirubra plants and 6,500 calisaya were counted. The sowings of 1877 had produced 19,700 succirubra and 4,000 calisaya. Some 30,000 cuttings of succirubra were put in.

Besides the above, the propagation-beds contained 19,000 calisaya and 1,700 succirubra sown in 1877.

Of the above 100,000 plants, nearly some 40,000 are now ready for transplanting in the open, and, as the blanks left by dead condaminea should be filled up as rapidly as possible, it is intended to put out more plants than were transplanted last year. The cost of coolies may be slightly increased, but the advantage gained by a rapid filling up of the ground that has to be weeded even now will compensate.

Plants of condaminea are reported as looking anything but well, and a certain number died during the year. A few with larger leaves, and which Takai, the Karen Assistant, considers a variety, look well.

The younger plantation of succirubra and calisaya look very well; in fact, to a certain age these two kinds seem to grow freely, and as yet the older calisaya have shown no sign of sickness.

In the oldest plantations, a certain number of trees, succirubra, from six feet to 12 feet in height, have succumbed, and many more have an unhealthy appearance.

In the Divisional Officer's opinion, the cause of these deaths is perhaps the smallness of the holes in which the plants were put out. The tree has a pivoting root, that, however, fails to penetrate the hard concrete-like subsoil, which solidifies into a mass nearly as hard as the original granite.

No extension will be made this year, and the whole of the establishment will be employed on filling up blanks.

All things considered, the cinchona experiment does not promise well. The oldest trees dying off, and the trees of very small size flowering and fruiting freely, are only too sure signs that the tree finds itself in site not adapted to its requirements.

Three small coffee plants were procured and put out in November 1878; and in May 1879 they were found to have established themselves and to be thriving luxuriantly.

As an experiment, more coffee, and some tea, should be tried.

Fire-protection, Yainay and Pyoon choung reserves.

94. Fire-protection arrangements were again entirely successful in both the Pyoon choung and Yainay reserves, aggregating 9,193 acres in area. The cost of the work was Rs. 1,091.

E.—SHWE-GYEEN DIVISION.

1.—Area and Boundaries.

Boundaries.

95. The boundaries of the reserves remain unaltered in this division.

Proposed reserve.

96. A small reserve of some two square miles, called the "Kyuntoung Reserve," was proposed for reservation during the previous year. These proposals are still awaiting the approval of the civil authorities.

2.—Protection and Improvement.

Improvement.

97. No works of improvement or protection were undertaken in the reserves.

F.—THE WESTERN, OR BASSEIN, DIVISION.

98. In this division no reserves have yet been taken up.

TENASSERIM CIRCLE.

A.—SALWEEN DIVISION.

1.—Area and Boundaries.

Additional areas sanctioned during the year.

99. During the year, the demarcation of the following additional areas as State forests was sanctioned by the local Government:—

District.	Forest district.	Approximate area. Square miles.
Amherst.—Attaran	Dalee	12
	Hpakaboh	82
	Kyoon choung	17
	Ma-oo	14
	Thingan-nee-noung	9
	Megwa	19
	Gwoon-gyee	48
Amherst.—Thoungyeen	Meplay	20
		166

Total area of reserved forests in the Salween division.

100. With this addition, the total area of State forests in this division has been increased from 85 to 251 square miles.

Final demarcation of boundaries.

101. The demarcation of the boundaries of the reserves noted in para. 99 was commenced early in the cold season and completed at the beginning of April.

The Kyoon choung, Megwa portion of the Gwoon-gyee and Meplay reserves, were demarcated by Mr. Bingham; the Hpakaboh, Ma-oo, Thingan-nee-noung, and portion of Gwoon-gyee, by Mr. Aplin; and the Dalee, by Mr. Thelluson.

The procedure was in accordance with Rule XIV. of the Forest Rules of 1865, and, in addition, cleared lines were made along nearly all the natural boundaries, with the object of rendering them more accessible and safer for purposes of patrol.

Great difficulties were encountered in obtaining labour and efficient guides in so sparsely-populated a region as the Attaran. Owing to this and the dense character of the jungle through which the lines had to be cut, the work progressed much more slowly than was anticipated.

Cost of demarcation.

102. The cost of demarcation was as follows:—

Reserves.	Labour and guides.	Boundary-boards, &c.	Total.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
Dalee	130 1 0	10 8 0	140 9 0
Hpakaboh	110 1 0	20 8 0	130 9 0
Kyoon choung	237 9 0	8 14 0	246 7 0
Ma-oo	113 0 0	15 1 0	128 1 0
Thingan-nee-noung	30 3 0	15 12 0	45 15 0
Megwa	41 13 0	6 8 6	48 5 6
Gwoon-gyee	88 9 0	38 3 0	126 12 0
Meplay	353 5 0	45 4 0	398 9 0
Total	....	....	1,265 8 6

The total length of the lines cleared to a width of from 12 to 15 feet along the boundaries was 73½ miles; and the average cost per mile, Rs. 15, including cost of labour for putting up boundary-marks.

Preliminary survey and selection of areas suitable for reservation.

103. In the Thoungyeen district, the teak localities east and west of the Mekkanay, hills, and extending southward of the Hteinoo choung along the Tacawkyo range, were examined by the Conservator, and two reserves selected, aggregating 90 square miles in area, and designated the "Mekkanay Toungdan" and "Tacawkyo Reserves."

Inspection of the Meglar and Ta-oo forests.

104. In connection with the selection of a large reserve for protection of wild elephants, the Meglar and Ta-oo localities were also visited by the Conservator, and the Donat range crossed by the Moolayeet peak and Pa-oo plateau routes, the maximum altitudes of which were ascertained to be 6,500 and 4,000 feet respectively.

Examination of the Lower Meplay district.

105. The examination of the Lower Meplay district was taken in hand by Mr. Nepean; but his tragic death soon interrupted the work, and it was subsequently not deemed necessary to continue it in that locality.

The tract between the Meplay hills and Thoungyeen river.

106. Mr. Bingham was deputed to the examination of the large and uninhabited tract between the Meplay watershed hills and the Thoungyeen river; but the length of time occupied in the demarcation of the Meplay reserve boundaries, and the early rain in April, precluded all prospect of obtaining satisfactory results this year, and the project had to be deferred till next cold season.

Selection of a new area in the Yoonzaleen district.

107. In the Yoonzaleen district, a reserve of an area of 20 square miles was surveyed and selected in the pine forest (*Pinus khasya*) near Loomatee, by Mr. H. B. Ward, Sub-Assistant Conservator of Forests.

2.—Protection and Improvement.

Fire-tracing.
Protection of the Beeling Maiwyne and Mainanway reserves.

108. The Beeling Maiwyne and Mainanway reserves were successfully protected from fire by the local (Karen) Forester, with the aid of the villagers, as has been done during the two previous seasons. The only expenditure incurred by the Forester was Rs. 33-8-0 for re-clearing certain boundary-lines, aggregating about 5½ miles in length, and used as firepaths.

Protection of the Doomdamee reserves.

109. Of the three Doomdamee reserves, fire-tracing was restricted to the Oankan-gyee reserve, for the reasons noted in para. 71 of previous year's Administration Report. The expenditure incurred was Rs. 55 for fire-tracing and protecting a line nearly seven miles in length. Fire was excluded from the Sinzway reserve, and permanent firepaths, varying from 15 to 50 feet in width, were formed within and without the reserve. The latter work was commenced early (before the close of the rains), but progressed very slowly, for want of labour, until an establishment of Kamoo coolies was entertained and brought from Myneloon-gyee, in Zimmay territory.

The total length of the permanent firepaths is estimated at 13 miles, and minor firepaths, eight feet wide, at six miles; and the cost of same, including pay and rations of Kamoo establishment, amounted to Rs. 860-1-0.

Protection of reserves in the Yoonzaleen district.

110. In the Wamoo reserve, Yoonzaleen district, the measures adopted by the Forester were nullified by a villager setting fire to the reserve while collecting honey, an operation which always needs the application of fire. The fire is reported to have spread over two square miles of this small reserve before it was checked. The eastern portion of the Kaheeloo reserve, Yoonzaleen district, for an area of 1,280 acres, was successfully protected by the local Forester. It represents the only portion occupied by deciduous forest and liable to the inroads of fire, the remainder being covered by dense evergreen forest.

Protection of the Dalee reserve.

111. A small portion of the Dalee reserve, Attaran district, *viz.*, 810 acres, was again successfully protected by the Forester in charge.

Teak *toungya* plantations.

112. In the Sinzway reserve, Yoonzaleen district, the Karens planted 20 *toungyas*, or about 90 acres, with teak. The countings gave a total of 57,763 seedlings on this entire area, the payment for which, inclusive of capitation-tax, was Rs. 768-3-8.

In the Beeling Maiwyne and Mainanway reserves, the Karens cultivated respectively 45 and 20 acres. The teak-seedlings were 8,913 in the former and 706 in the latter; and, though containing a considerable percentage of weak and puny plants, which succumbed in the dry season, yet may be considered as a fair beginning on the part of these Karens.

In the Oankan-gyee (Doomdamee) reserve and the adjacent Beelakat-gyee reserve, an area of about 16 acres was planted by nine Karen cultivators with 6,961 teak plants, at a cost of Rs. 89-8-0.

An area of about 11 acres was also planted up with teak in the fire-traced portion of the Dalee reserve, Attaran district.

The countings gave 4,791 seedlings on this area, for which no payment has been yet made, the Karens being desirous of payment according to the acreage, and not according to the number of plants actually raised.

Experimental teak plantations.

113. Of the three small "experimental" teak plantations formed in 1856 and never subsequently extended, the Thingan-nee-noung plantation, of 10 acres, lies within the lately demarcated reserve of that name in the Attaran district.

A thinning was carried out in it this dry season by Mr. Aplin, and trees of other kinds which have encroached into it were also felled, and creepers cut, at a total cost of Rs. 27-10-0.

Experimental sowing of teak in lines, to supplement natural reproduction.

114. On the lines 20 feet wide in the Sinzway reserve, referred to in para. 88 of previous year's report, teak-seedlings were successfully raised along their entirel ength, estimated at about two miles. The work was done by the Forest Ranger and his peon, and the cost of weeding was Rs. 12-8-0. Three more of the original lines cut by Mr. Bingham were cleared and prepared for sowing this dry season, at a cost of Rs. 161-10-8,—many trees at the sides having to be either felled or girdled.

It is noticeable that the plants, although free overhead, do not develop so rapidly along those lines as in the open *tounggyas*.

Breaches of forest rules.

115. The only breach of forest rules within a forest reserve which has been reported is the case of setting fire to the Wa-moo reserve, Yoonzaleen forest district. A villager of Peurleurdaw was ascertained to be the culprit, but the prosecution failed for want of direct evidence.

Experimental plantations of exotic and other trees.

116. No regular plantation has been yet formed in this division for exotic trees; but, as an experiment, a few mahogany seedlings, received from the Botanical Gardens, Calcutta, in 1874, were set out near some limestone hills in the Attaran, and afterwards the survivors were removed to the vicinity of a hpoongyee khyoung at the base of the Toungwine range, near Moulmein.

These trees, four in number, are doing well, and are now of the following sizes :—

	Height.	*Girth.*
Two trees	17 feet	11 inches.
Do do.	7 „	4 „

3.—Yield and Working.

Extraction of timber

117. The separate and regular working of the State forests not having yet commenced, nothing of note has to be recorded under this head.

Girdling.

118. In the southern portion, Meplay reserve, in the course of the girdling operations conducted this season and sanctioned in Government of India letter No. 144 (Forests), dated 7th February 1879, a total of 635 1st class teak trees, averaging 7½ feet in girth, were girdled in the following sub-districts :—

Teesara	65
Bawthaloo	247
Mowa-mai and Laikpo	142
Htootolaw and Pawkaphoo, feeders of Bawthaloo and Htoodogwee ..	181
Total ..	635

These trees represented from 20 to 60 per cent. of the 1st class trees standing on the ground, the percentage varying according to the presence of 2nd class and other seed-shedding trees and the marketable quality of the available timber. The localities in which the work was carried on were almost wholly on low but steep hills forming the western slopes of the Meplay watershed range, and characterized by the superior growth of the timber.

Rules observed in girdling.

119. The following rules were observed in the execution of the work :—

(1) All I. class trees to be girdled if of such growth as will yield marketable timber, and if standing in localities whence they can with advantage be removed.

(2) Except in the case of trees half dead or exhibiting want of vigour, no tree to be girdled which stands isolated and beyond reach of seed from other teak trees.

(3) Where I. class trees stand isolated, and are not associated with a number of II. class trees, no trees are to be girdled.

(4) In the vicinity of every girdled tree, a few trees of other kinds shall be girdled or felled wherever this may be necessary towards facilitating the springing up of teak-seedlings and the growth of teak of the younger classes which may be in danger of suppression.

Selection of trees girdled.

120. The girdled trees were partly selected by the Conservator and partly by Messrs. Bingham and Aplin; and hence no revision of the work was necessary. In addition to this, 311 trees of other kinds were selected for felling and girdling wherever this was deemed necessary for insuring reproduction of teak and the general improvement of the forests. Fifty-two teak trees were also freed from creepers. The nature of the work was also such as to preclude the holding at the same time of valuation surveys, and its laborious character may be judged by the fact that on an average the selection of only 30 trees required an officer to be on the move as much as eight to 10 hours daily.

B.—SOUTH TENASSERIM DIVISION.

1.—Area and Boundaries.

No State forests in this division.

121. No areas have yet been taken up in this division as State reserves.

2.—Protection and Improvement.

Experimental plantations of indigenous and exotic trees.

122. Hitherto experiments have been carried on within the compound of the forest office; but towards the close of the year an area of about 43 acres was selected within a distance of about three miles from Mergui, and, of this, a few acres were cleared and prepared for the cultivation of different varieties of India-rubber and other plants, and those in particular which have been raised expressly at the Royal Botanical Gardens, Ceylon, for experimental cultivation in South Tenasserim.

At the request of Dr. Thwaites, a young man was specially deputed to the Royal Botanical Gardens, Peridenya, to take charge of these latter plants and receive instruction in the method of cultivation found to be so successful in Ceylon. He took charge of 519 cuttings and plants, chiefly of *Hevea braziliensis*, and a few other plants, all packed in 10 Wardian cases, and reached Mergui on the 30th May 1879. In transhipment in the Madras roads, two of the Wardian cases were much injured, and others severely shaken.

The plants which survived the voyage are reported to be—

178	*Hevea braziliensis.*
2	*Castilloa elastica.*
5	Nutmeg.
2	Vanilla.
2	Cocoa.

Towards the close of the year, 2,500 seeds of Ceara India-rubber (*Manihot glaziovii*), as well as some seed of the rain tree (*Pithecolobium saman*), received from Dr. Thwaites, were sown in the plantation.

The eight Para India-rubber trees (*Hevea braziliensis*), received originally from Dr. King, Calcutta, are thriving in the forest office compound, and are large enough to admit of a considerable number of cuttings being obtained from them. Two of them are respectively 20 and 25 feet in height; the remainder, eight feet high.

During the year, Mr. Sutherland, the Overseer in charge, procured 200 seedlings of the akyaw (*Aquillaria agollocha*), which will be set out during the rains.

SECTION III.—UNRESERVED FORESTS.

A.—PROME DIVISION.

2.—Protection and Improvement.

Breaches of forest rules in Prome district.

123. In the Prome district, two men were punished with fines of Rs. 25 and Rs. 20 respectively, or in default one month's rigorous imprisonment, for felling teak trees.

Breaches of forest rules in Thayetmyo district.

124. In the Thayetmyo district, the following prosecutions took place:— Eleven men, for cutting 46 teak-posts in the Mindoon forest: one man was fined Rs. 80; one, Rs. 16; one, Rs. 12; one, Rs. 6; four, Rs. 4 each; and one, Rs. 2. Four men for cutting 26 teak trees in the same forest, one man was fined Rs. 10, one Rs. 7, and two Rs. 4 each. Again, for cutting one teak-post, one man was fined Rs. 5. For felling and disposing of three teak trees, two men were punished with one month's rigorous imprisonment and a fine of Rs. 20 each, or in default one month's further imprisonment. Four men were charged with felling 40 teak-posts: one was acquitted, two, being natives of Upper Burma, were not forthcoming, and one was fined Rs. 20, or in default one month's rigorous imprisonment. At Allanmyo, three men, free permit-holders for reserved timber, were fined, two of them Rs. 15 each, and one Rs. 10, for cutting beyond the five-mile radius.

Teak felled by an Upper Burma forest contractor.

125. An Upper Burma forest contractor, Nga Shwe Myin, employed by a permit-holder in Burmese territory, felled a considerable number of 1st class green teak trees near the frontier line in British territory. No criminal proceedings can be instituted, as the frontier line has only lately for the first time been demarcated: it being previously an imaginary line. At present, 146 trees, varying from 4 ft. 6 in. to 9 ft. girth, have been found to have been felled, of which 64 only have been removed. The search for felled trees and stumps is still being continued, with a view to the recovery of the timber if possible. It is doubtful if any civil action can be instituted, the 64 logs having been mixed up with other timber, and being, consequently beyond all possibility of identification.

Experimental cultivation of exotics.

126. A small parcel of seed of *Pithecolobium saman* was received from the Conservator's Office for experimental cultivation. The seeds were sown at the end of August,—about half the quantity in the compound of the Prome Office, a small quantity in a cleared part of the Prome plantation reserve, and the remainder at Kadin-nga-zin. The seeds all germinated well. Of those grown in the office compound, 26 trees were planted out at the Mosa and Simmisway railway-stations, 20 in the forest office compound, 37 near the Promo Elephant-shed, 30 along the roads in Promo town, 74 along roads in Thayetmyo, and 38 sent to Thongzai to be planted in the new civil station. These trees are all doing well, some of them being already over eight feet in height. The only trees that are not thriving are a few that were planted in partial shade.

The young trees were put out during the cold weather and watered for two days, after which they received no further care. In the Prome plantation 60 trees have come up, which are doing fairly well. At Kadin-nga zin, 200 plants are growing well: they will be planted out as soon as the rains commence. The total cost of this cultivation was Rs. 111-12-0, incurred chiefly in clearing ground for planting out the young trees.

3.—Yield and Working.

(*a.*) *Timber extracted by Departmental Agency.*

Outturn of teak.

127. The following is the outturn of the Prome division:—

			Rs.	A.	P.
Nawing forests	.. .. ..	494 logs, costing ..	4,430	2	0
Boolay do.	.. .. ..	61 do. ..	429	12	0
Mindoon do.	.. .. ..	268 do. ..	5,386	13	4
Mudday do.	.. .. ..	75 do. ..	752	10	6
Thallaydan do.	.. .. ..	55 do. ..	446	10	0
Mahathaman do.	.. .. ..	79 pieces ..	90	11	0
Boolay choung	.. .. ..	10 old logs ..	0	0	0
	Total, 1,042 logs, costing ..		11,536	10	10

Neaped timber.

128. The following neaped logs have been counted and marked:—

	Logs.
In Boolay choung	455
„ Nawing do.	755
„ Mindoon do.	392
„ Mudday do.	205
Total ..	1,807

In addition to these, 1,100 logs have been dragged to the Nawing choung during the past cold weather, and 491 to the Bangone choung, making up the total number of logs lying in streams to 8,398.

Drift timber operations.

129. At the commencement of the year there was a balance of 23 unclaimed drift logs on hand; 80 logs more were salved during the year, making a total of 103. Of these, 65 were made over to claimants, and 38 remain in hand.

Rafting to Rangoon Central Depôt.

130. In addition to the Mindoon timber (268 logs) which was delivered at Rangoon by the contractor, 613 logs from other streams were rafted to Rangoon, at a cost of Rs. 1,839. This amount is not included in the cost of timber shewn in para. 127.

Local disposals of timber.

131. The following timber was disposed of locally:—

				Rs.	A.	P.
At the Prome Depôt to various purchasers ..	55 logs teak, measuring	1,550	cubic feet, for	706	7	6
To Executive Engineer, Henzada ..	13 do., do.	1,281	do.,	896	0	0
To ditto. Prome	25 Engyin and Theya, do.	646	do.,	451	8	0
At the Thaigone Railway-station	58 teak scantlings, do.	185	do.,	148	0	0
At the mouth of the Thallaydan	37 inferior logs, do.	1,100	do.,	277	8	0
In the Boolay	10 teak logs, do.	992	do.,	694	12	0

Credit for outstandings

132. The division was also credited with Rs. 7,010-4-9 on account of 102 logs sold in the Padashin khyoung in the year 1875-76.

Contractors' liabilities.

133. Ten contractors were employed on timber operations, with outstandings on the 1st April 1879 amounting to Rs. 9,870-14-5, which is amply covered by work done, except Rs. 395, which is probably irrecoverable.

Elephant establishment.

134. Three elephants from the Tharrawaddy division were temporarily employed on demarcation work. Two elephants are permanently attached to the division. The health of the elephants throughout the year was good.

(*b.*) *Timber and Forest Produce extracted by Consumers or Purchasers.*

Extraction of timber by purchasers.

135. In the Mindoon forest, 42 waif logs, measuring 115 c. ft., were sold for Rs. 29-6-3; and 28 logs, measuring 350 c. ft., for Rs. 72-9-6. In the Meaday forest, 44 logs, measuring 625 c. ft., were sold for Rs. 125; and in the Mahathaman forest, 19 logs, measuring 270 c. ft., for Rs. 48-12-0.

Grants of timber under the forest rules.

136. Fifty inferior teak logs were given to Moung Tsouk, Extra Assistant Commissioner, Mindoon, to build a *zayat* in place of the old Government rest-house, which had been burnt down.

Timber of reserved kinds other than teak extracted from the forests under trade permits.

137. The following statement exhibits the number of trade permits issued during the year :—

By whom issued.	Number of permits.	Number of trees.								Permit fees.
		Kolo.	Pynkadoe.	Padouk.	Engyin.	Theya.	Eng.	Sha.	Total.	Rs. A. P.
Thayetmyo district.—Civil Officers ..	102	20	181	2	350	721	2,860	2	4,298	1,353 0 0
Prome district.—Civil Officers ..	5	..	21	..	33	15	..	..	74	34 8 0
Prome Forest Office .. Thayet district	74	..	199	..	80	324	1,033	..	1,710	599 12 0
Prome do.	67	..	387	..	118	138	854	..	1,564	635 0 0
Total ..	308	20	788	2	581	1,198	4,747	2	7,646	2,622 4 0

The amount realized at revenue-stations was as follows :—

Name of station.	Number of logs and pieces.							Revenue.
	Pynkadoe.	Padouk.	Theya.	Engyin.	Eng.	Sha.	Billets of firewood.	Rs. A. P.
Prome	566	..	534	190	49,626	1,350	16,880	2,070 2 0
Yuatoung	97	9	482	334	2,774	..	56,035	2,664 4 6
Total ..	663	9	1,016	524	52,400	1,350	72,415	4,734 6 6

Firewood of reserved kinds timber cut as fuel for steamers declared to be free of revenue.

138. In November last the Commissioner issued an order to the effect that the Forest Department were acting illegally in collecting revenue on firewood of the 12 reserved kinds brought for sale to the steamers at Thayetmyo and Yuatoung. Collections of revenue on firewood accordingly ceased from that date.

Nyoung-ben-tseik establishment withdrawn

139. No establishment was maintained at the Nyoung-ben-tseik revenue-station, as, owing to the diminished demand for cutch boxes, timber trade at that place has almost entirely ceased.

Cost of revenue-stations.

140. The cost of extra establishment maintained at the Yuatoung Revenue-station was Rs. 708, and at Prome Rs. 288.

Revenue on minor forest produce.

141. The revenue from cutch and charcoal permits amounted to Rs. 7,378-8-0.

Free permits.

142. The following statement exhibits the number of trees of different species for which free permits were given :—

Name of district.	Number of permits issued.	Number of trees.							
		Sha.	Pyinkadoe.	Theya.	Engyin.	Eng.	Koko.	Padonk.	Total
Prome	302	612	3,008	1,442	867	1,156	..	..	7,085
Thayetmyo	574	873	2,644	3,840	3,118	1,855	111	9	12,450
Total ..	876	1,485	5,652	5,282	3,985	3,011	111	9	19,535

4.—Financial Results.

Financial results.

143. The Prome division, as will be seen from Statement 49, exhibits an income of Rs. 28,824-3-8, against an expenditure of Rs. 95,038, or a deficit of Rs. 66,214. It has, however, to be credited with the amount realized—Rs. 63,757—by the Rangoon Agency Office (*see* para. 188). The expenditure, moreover, includes a sum of Rs. 59,876-10-8, charged off in this year's accounts for timber delivered during 1877-78. Under Sub-head II*a*., there has been a decrease of Rs. 6,763, due to the fact that most of the cutch tracts are worked out. This same cause also directly influenced the revenue under II*a*., causing a decline of Rs. 2,070 in the receipts, due to the lessened demand for eng timber for cutch boxes.

B.—THARRAWADDY DIVISION.

2.—Protection and Improvement.

Breaches of forest rules.

144. Two men were prosecuted for poisoning the water of the Gamong khyoung, and sentenced to a fine of Rs. 20 each, or, in default, a fortnight's simple imprisonment. Twenty-five men were prosecuted for boiling cutch without permits : 21 were fined Rs. 7 each, and four fined Rs. 10 each.

3.—Yield and working.

Outturn of teak.

145. Six thousand two hundred and forty-nine teak logs were brought to the depot by contractors, at a cost of Rs. 61,955-8-0. One hundred and eighty-nine teak scantlings sawn from refuse teak were extracted and brought to Otpho and Zeegon : of these, 42 were disposed of to the Railway Department, and the remainder are still on hand.

Extraction of bamboos.

146. Ten thousand bamboos were cut and floated to Rangoon from the Thongzai forests, at a cost of Rs. 450, for being utilized in the bamboo-crushing experiments for making paper-stock for Mr. Routledge.

Drift timber.

147. Ninety-four drift logs of teak were collected at Sanyuay, and, after due notice, were sold.

Timber disposed of locally.

148. Thirty-two I. class logs, containing 43·22 tons, at Rs. 55 per ton, and one II. class log, containing 1·25 tons, at Rs. 35 per ton, realizing Rs. 2,441-11-0, were sold upon indent to the Railway Department. Ten logs were bought by private parties for Rs. 485-8-0, and 36 logs were used departmentally for the Poungday Bungalow.

Forest contractors' liabilities.

149. Of 19 timber contractors employed during the year, only five remained with unadjusted accounts. The balances due by these men are secured either by work done, or by mortgage or loan bonds upon elephants.

Elephants.

150. Thirty-one elephants remained upon the rolls at the close of last year. During the year, one was purchased, bringing the number up to 32. The disposals have been as follows :—

Transferred to other divisions	9
Paid for in full by contractors	12
Total ..	21
Balance in hand ..	11

Teak extracted by purchasers.

151. By the sale of 212·26 tons of refuse teak, a sum of Rs. 2,504-6-2 was realized.

Timber of reserved kinds other than teak extracted under trade permits.

152. One hundred and eight trade permits for timber of the reserved kinds were issued. The number of each species is thus shewn :—

Permits.	Cutch.	Pyinkadoe.	Theya.	Engyin.	Pyimma.	Eng.	Kanyin.	Thitsee.	Thingan.	Total.	Revenue.
											Rs. A. P.
108	10	151	29	50	450	753	48	1	9	1,501	519 12 0

The total revenue, taken on the tonnage measurement of reserved timber, is—

Cutch.	Pyinkadoe.	Theya.	Engyin.	Pyimma.	Eng.	Kanyin.	Thitsee.	Billets of fire-wood.	Revenue.
									Rs. A. P.
117	1,912	29	9	667	4,779	677	6	54,200	5,995 10 0

Minor forest produce.

153. The Deputy Commissioner realized on permits for the—

	Rs.
Extraction of cutch	1,490
Ditto thitsee	75
Ditto wood-oil	350
Manufacture of charcoal	151-8
Total ..	2,066-8

In addition, Rs. 279-14-6 on account of charcoal were taken at Taropmaw.

Free permits.

154. The following free permits were issued for timber of reserved kinds other than teak :—

By whom issued.	No. of permits.	Cutch.	Pyinkadoe.	Theya.	Engyin.	Pyimma.	Thitsee.	Eng.	Eng saplings.	Total.
Deputy Commissioner, Tharrawaddy,	153	983	1,008	268	215	472	135	258	..	3,339
Assistant Commissioner, Poungday..	24	..	461	100	..	..	..	300	..	861
Divisional Officer	113	986	833	736	156	262	..	327	4,050	7,350
Total ..	290	1,969	2,302	1,104	371	734	135	885	4,050	11,550

4.—*Financial Results.*

Financial results.

155. The revenue of the year amounts to Rs. 51,868-4-1. This is exclusive of the sums realized by the civil authorities and the Agency division (*see* para. 188) on behalf of the Tharrawaddy division. The total expenditure amounted to Rs. 1,30,780-13-6. The outstandings against the pyinkadoe sleeper contractors remain unaltered. These sums are irrecoverable, and should be written off.

C.—RANGOON DIVISION.

2.—*Protection and Improvement.*

Breach of Forest Rules.

156. Three men were prosecuted for felling reserved trees without a permit, and conviction obtained in each case.

3.—*Yield and Working.*

(*a.*) *Timber extracted by Departmental Agency.*

Outturn of teak.

157. From the Pegu forests, 381 logs were extracted, at a cost of Rs. 2,316; and 20 logs, the extraction of which cost Rs. 307-4-0, were used for the forest office at Pegu.

Drift timber.

158. On the Hline river, 116 logs of teak were salved, at a cost of Rs. 574-8-6.

Disposals of timber.

159. Nine logs of teak were sold on the Hpoungleng choung for Rs. 231-5-0.

Elephant establishment.

160. At the commencement of the year there were three elephants in the division: one was received from Tharrawaddy and two have died, leaving therefore only two in the division.

Timber of reserved kinds other than teak extracted under permits.

161. The following tables shew the number of trees for which permits were granted, and the revenue realized therefrom:—

1st.—Instalments.

	Eng.	Pyma.	Pyinkadoe.	Kanyin.	Thingan.	Engyin.	Theya.	Anan.	Thitkha.	Thitkadoe.	Revenue.
											Rs.
	2,413	2,454	1,786	1,180	110	9	..	24	105	88	8,385
Public Works Department,	..	..	504	..	..	124		..	..	..	314
											8,699

Tonnage, in logs.

											Rs. A P.
	11,762	1,707	746	2,033	71	8	3	9	92	15	25,161 10 11
Public Works Department,	..	..	289 tons.	..	..	102 tons.		..	..	..	1,759 8 0
											26,921 2 11
Amount realized by sale of posts bought for Awein house								..	..	..	60 0 0
											30,980 2 11

4.—*Financial Results.*

Financial results.

162. The revenue of the year amounts to Rs. 32,781-6-3, against an expenditure of Rs. 38,100-0-1, shewing a deficit of Rs. 5,318-9-10. The sum realized by Agency division at credit of this division is Rs. 15,429, shewing a nett surplus of Rs. 10,110-6-2.

D.—SITTANG DIVISION.

2.—Protection and Improvement.

Breaches of forest rules.

163. Only one prosecution was instituted. A carpenter at Toungoo was charged with converting a log of foreign teak-wood before it had been reported, marked, and passed by the Forest Department. He was fined Rs. 50.

3.—Yield and Working.

Outturn of teak.

164. From the Sittang forests, 2,588 logs of teak and 528 of thitka were extracted by Government contractors and delivered in Rangoon, at a cost of Rs. 42,013-2-2.

Rafting to Central Depôt.

165. One hundred and three waif teak logs were despatched to Rangoon, of which 93 reached the central depôt by the close of the year, at a cost of Rs. 160.

Twenty logs of laiza were bought, at a cost of Rs. 180-8-0, and sent to Rangoon for experimental railway sleepers. Eighteen reached.

One thousand seven hundred and twenty-eight logs of teak were delivered in Rangoon, but have not yet been paid for, the measurement statements not being in time.

The balance of account due on 1,210 logs of teak and 176 of thitka, for the delivery of which credit was taken last year, was paid this year, *viz.*, Rs. 9,197-15-0.

Drift timber operations.

166. Nine thousand three hundred and three drift logs, mostly from Upper Burma Ningyan forests, were salved and brought into Toungoo. Of these, 8,266 were made over to claimants on receipt of salvage fees; 103 lapsed to Government, and were despatched to Rangoon as waif; and 931 broke up and floated away during high floods, to be probably caught again below Toungoo.

Free permits for extraction of timber of reserved kinds other than teak.

167. Thirteen thousand and ninety trees of the reserved kinds were given on free permits by the civil authorities, as per following statement :—

Teik.	Thingan.	Padouk.	Pyinkadoe.	Anan.	Thitka.	Engyin.	Eng.	Pynma.	Kanyin.	Sha.	Not separated.	Revenue.
												Rs.
Thagaya	..	16	641	5	521	40	744	393	..	30	403	..
Myoma	6	26	418	17	641	188	1,033	463	22	10	4	..
		22	677	..	492	230	1,320	241	4	..	2,158	..
		2	252	..	98	..	101	611	..	..	74	..
		1	29	..	..	..	100	7	..	..	155	..
Total ..	6	67	2,012	22	1,752	458	4,198	1,715	26	40	2,794	13,090

Timber of reserved kinds other than teak extracted under trade permits.

168. The following statements show the number of trade permits issued during the year :—

Kind of tree.	Number of permits.	Number of trees.	Revenue. Rs.	A.	P.
Thingan	180	850	425	0	0
Padouk	..	10	5	0	0
Pyinkadoe	7	11	5	8	0
Theya	..	15	7	8	0
Total	..	886	443	0	0

Statement of logs extracted under trade permits, and tonnage realized for the year 1878-79 :—

Kind of tree.	Number of logs.	Revenue.
		Rs. A. P.
Thingan	878	3,833 4 2
Pyinkadoe	7	31 0 9
Padouk	*Nil*	..
Theya	*Nil*	..
Total	..	3,864 4 11

Elephant establishment.

169. Two elephants were bought for the division at the commencement of the year, and one transferred from the Agency division.

Four dragging-elephants were bought for timber works: of those, one died before the close of the year's work, and two more have since died. The matter is being carefully inquired into; but elephants at Toungoo appear at times to be subject to fatal epidemics.

Revenue from minor forest produce.

170. The revenue derived from this source is collected by the Deputy Commissioner, and realized Rs. 1,828.

4.—Financial Results.

Financial results.

171. The expenditure amounts to Rs. 89,210-15-0; and the receipts, not including the civil revenue for March, to Rs. 39,432-6-11. For sum at credit of this division in Agency, *viz.*, Rs. 1,12,999, *see* para. 188.

E.—SHWE-GYEEN DIVISION.

2.—Protection and Improvement.

Breaches of forest rules.

172. Only one prosecution was instituted. The case was dismissed by the Assistant Commissioner, Kyeik-hto, on the ground that the wood in question had been passed and marked by an employé of the Forest Department. This man has since been prosecuted and imprisoned for offences committed in the Salween division, Tenasserim circle.

3.—Yield and Working.

Outturn of timber.

173. Five hundred and fifty-six teak logs were extracted and 229 floated to Rangoon on the half profit principle. Three hundred and fifty-three logs of woods of other kinds were extracted and divided on the half profit principle between Government and the contractor. Three hundred and twenty-five drift logs were salved.

Timber of reserved kinds other than teak extracted under trade permits.

174. Trade permits were issued for the following trees :—

Thingan	57
Koko	7
Pyinkadoe	722
Anan	7
Eng	167
Pyimma	203
Kanyin	12
Total ..	1,175

Free permits.

175. Free permits were issued for the following trees :—

Pyinkadoe	237
Eng	132
Pyimma	901
Total ..	1,270

4.—Financial Results.

Financial results.

176. The revenue of the year amounts to sum realized locally, Rs. 5,055-12-10; the expenditure amounted to Rs. 1,429-0-11; at credit in Agency account, Rs. 10,968.—(*See* para. 188.)

F.—WESTERN DIVISION.

2.—Protection and Improvement.

Breaches of forest rules.

177. Of the two cases which occurred (felling teak saplings), the parties were convicted and fined Rs. 50 each: the fines were, however, remitted on appeal. Two others were charged with stealing and selling a log of teak: one was sentenced to a year's rigorous imprisonment, and the other to six months.

3.—Yield and Working.

(a.)—Timber extracted by Departmental Agency.

Outturn of timber.

178. *Woods other than Teak.*—Of woods of other kinds, 568 logs were worked out by contractors. In all, 704 logs were sold during the year, chiefly at Bassein, and realized Rs. 6,197-8-0. Seven hundred and twenty-two drift logs were also salved, and Rs. 6,181-11-0 realized under III.

(b.)—Timber removed by purchasers.

Receipts at revenue-stations.

179. At the four revenue-stations attached to this division, Rs. 9,979-9-2 were collected on reserved woods during the year.

4.—Financial Results.

180. The year's revenue amounts to Rs. 22,390-12-3, and expenditure to Rs. 23,098-10-9. For sum at credit in Agency, *viz.*, Rs. 1,082, *see* para. 188.

RANGOON AGENCY OFFICE AND CENTRAL TIMBER DEPOT.

2.—Improvements.

Communications and buildings.

181. *Roads and Bridges.*—The crossings at the Government Depot were repaired at a cost of Rs. 22-4-0, and the Elephant bridge over the Tsabo choung, at a cost of Rs. 17-12-0.

Revetments.—The revetment near No. 2 Guard-house was extended, at a cost of Rs. 35-8-0.

Buildings.—The annual repairs to the buildings attached to the Government Timber Depot were executed at a cost of Rs. 1,050-8-0; and petty repairs to the Elephant-shed, at a cost of Rs. 5-9-0. Special repairs to the depôt office building were executed by the Executive Engineer, at a cost of Rs. 3,351.

The revenue-station at Poozoondoung was pulled down, under orders of the Secretary to the Chief Commissioner, Public Works Department, for the completion of the Monkey Point Battery, and a temporary one erected at a cost of Rs. 70.

3.—Working.

Working of the depôt.

182. The balance of timber in hand on 1st April 1879 was—

Teak.

Logs.		Crooks.	Sleepers.	Tons.
I. Class.	II. Class.			
2,813	9,818	..	4,596	11,178

Woods of other kinds.

Logs.	Sleepers.	Tons.
84	1,042	95

Arrivals of timber.

183. The arrivals of timber during the year, as exhibited in Form No. 55, are—

	Tons.
Tharrawaddy	6,167
Rangoon	281
Sittang	4,856
Shwe-gyeon	528
Prome	1,485
Henzada Western division	409
Agency	1
Drift timber	702
	14,429

and represent—

Teak :—

Logs.		Crooks.	Sleepers.	Tons.
I. Class.	II. Class.			
3,558	9,611	..	..	12,240

Woods of other kinds.

Logs.	Sleepers.	Tons.
1,230	..	985

Disposals

184. The number of logs, sleepers, bamboos, &c., disposed of during the year, and the sums realized thereon, as exhibited in Form No. 57, are—

			Rs.	A.	P.
Auction sales	14,306 ..	4,12,890	8	0	
Indent sales	532 ..	26,203	3	6	
Bamboos	601 ..	78	4	0	
Canes	28 ..	28	0	0	
Scantlings	983 ..	620	15	7	
Sleepers	4,689 ..	8,002	4	0	
Drift timber	583 ..	9,366	0	0	
Do. to claimants	608 ..	1,624	2	0	
Written off	520 ..	....			
Total ..	22,850 ..	4,58,813	5	1	

Teak.

Logs.		Crooks.	Sleepers.	Tons.
I. Class.	II. Class.			
2,888	12,006	..	4,511	13,891

Woods of other kinds.

Logs.	Sleepers.	Tons.
1,155	678	955

giving an average of Rs. 29-9-5 per log, or Rs. 31-15-9 per ton, exclusive of sleepers, bamboos, canes, scantlings, and drift timber. Comparing these rates with those of the previous year, it will be observed that there is a great falling off, which is to be accounted for,—first, by the failure of the Glasgow Bank, by which two of the local firms had to close business; secondly, by the very small demand for I. class timber for the European market; and,

thirdly, by the importation of some 20,000 logs of very inferior timber from foreign territory. The timber market throughout the year was in a very unsatisfactory state, and it is feared it will continue so for some time to come.

Depôt balance.

185. The balance of timber in hand at the Government Timber Depôt at the close of the official year was—

Teak.

Logs.		Crooks.	Sleepers.	Tons.
I. Class.	II. Class.			
2,983	6,953	....	85	9,527

Woods of other kinds.

Logs.	Sleepers.	Tons.
159	364	125

valued at Rs. 29-9-5 per log all round, as per classified list of timber in hand on 31st March 1879.

Woods other than teak and bamboos.

186. A large number of these passed the Kemendine and Poozoondoung Depôt during the year, amounting in the aggregates to 17,119 logs, 37 boat-hulls, and 1,299,700 bamboos.

187. Three logs of woods of other kinds were shipped to Calcutta during the year for the Opium Agent, Behar, as samples.

4.—Financial.

188. The Agency Depôt was kept up at an expenditure of Rs. 66,428, and Rs. 3,844 were spent on salving logs. The revenue realized has been credited as follows :—

	Rs.
Prome	63,757
Tharrawaddy	1,97,855
Rangoon	15,429
Sittang	1,12,999
Shwe-gyeen	10,968
Western	1,082
Agency for drift timber disposed of	7,146
Total ..	4,09,236

TENASSERIM CIRCLE.

1.—Area and Boundaries.

189. Assuming the entire area outside the State reserves and areas cultivated to fall under the designation of "unreserved forests," the area over which these latter forests are spread may be roughly estimated at 34,399 square miles.

Area exclusive of State reserves and areas under regular cultivation.

A.—SALWEEN DIVISION.

2.—Protection and Improvement..

190. One person was prosecuted at Amherst, before the Extra Assistant Commissioner, for the extraction of a thingan boat-hull without permit, and fined Rs. 10. The boat-hull was confiscated, and realized Rs. 81.

Breaches of forest rules.

191. The Yea Forester reported 19 individuals as having cut thingan wood, kanyin trees, and extracted wood-oil, without permit. The result in the Extra Assistant Commissioner's Court has not yet been reported. Two cases of unauthorized extraction of wood-oil and collection of dammer were also reported to the Deputy Commissioner, Amherst district, as provided by the rules in force ; but the results have not yet been ascertained.

Illegal felling of thingan and kanyin.

Breaches of Kadoe Revenue Rules.

192. Mr. Slym investigated and dealt with 68 cases involving breaches of Kadoe Rules, or connected with timber in transit on the Salween river. The details of these cases will be found in annexed statement No. 48.

Cases tried under the Indian Penal Code.

193. Five cases were tried under the provisions of the Indian Penal Code and Criminal Procedure; and of these, two were submitted to the District Magistrate for enhanced punishment.

Increase in the number of persons fined.

194. Compared with the previous year's figures, the number of persons fined increased from 58 to 68, and the number imprisoned from seven to ten.

Amount realised on account of fines.

195. The amount received on account of fines and forfeiture was Rs. 1,149, or Rs. 373 more than the previous year; and the number of logs confiscated and detained amounted to 120, or 42 less than during the previous year.

Necessity for early enforcement of the new rules.

196. The increase in the number of offences committed on the Salween river shews the need for the early adoption of the new rules now under consideration.

Communications.

197. The construction of the Hpapoon Forest Rest-house, West Salween sub-division, was completed during the year. The total expenditure amounted to Rs. 2,148-8-0.

For the storing of paddy for the depôt elephants, Moulmein, a substantial shed was erected at a cost of Rs. 193-9-0.

3.—Yield and Working.

Girdling.

198. Late in March, girdling operations were commenced by Mr. Aplin, under the Conservator's supervision, in the Mekkanay sub-district, and continued northward through the teak localities east of the Meplay river.

The work was in accordance with the rules noted in para. 119, and closed with a total of 299 I. class trees girdled in tracts outside the limits of the Meplay reserve, *viz.*—

	Trees.
Mekkanay sub-district, including Pah choung	199
Thingan-nee-noung	30
Teesara	37
Lower Bawthaloo	33
Total ..	299

Of these, the Mekkanay tracts, with 199 trees, lie within the recently selected Mekkanay Thoungdan reserve.

199. In addition to this work, 195 trees of other kinds were girdled and felled, which stood in too close proximity to teak trees, and 66 creepers were cut.

Teak timber extracted from the forests by Government agency.

200. The outturn of teak timber from the forests of the Salween division was 8,328 logs, or 6,893 tons.

This, compared with the previous year's yield, exhibits a decrease of 2,273 tons, due chiefly to a general falling-off in the outturn of nearly all the forests but the Thoungyeen. The Upper Salween and Yoonzaleen forests also shew a decrease of about 600 tons; and from the Hlinebway nothing was extracted; but again, on the other hand, the Attaran forests exhibit an increase of about 300 tons, and the Houndraw, Koloon, and Meebong forests yielded about 200 tons; whereas nothing was obtained from them during the previous year. As extraction continues to be limited to dead and fallen timber, the outturn cannot but be subject to constant fluctuations, as well as a more or less continued decrease, unless in the meantime girdling operations are resumed.

Drift timber collected by departmental agency.

201. The drift timber operations in this division embrace to such a large extent the salving of foreign timber on the Salween river, that it will be more correct to record the details of this work under the Timber Revenue Department; and it will suffice, consequently, to note here only the results as being 6,818 logs of teak timber, or 2,434 logs in excess of the collection of the previous year.

Outturn of teak timber from leased forests.

202. The leased forests, which are now only the Attaran and Pandaw forests, the 30 years' leases of which expire in 1896, yielded 2,444 logs and pieces (but chiefly the latter), or 996 tons.

Outturn of timber of other kinds by departmental agency.

203. The timber of other kinds extracted by Government contractors comprised 315 pieces, or 130 tons, of padouk; 162 logs, or 105 tons, thitkadoe; eight piece, or five tons thitya; and 67 logs, or 40 tons, pyinkadoe, making a total of 280 tons, or 106 tons in excess of the pre-

vious year's outturn. There was again no inducement to extract thitka (*Pentace burmanica*), the large stock on hand not meeting with ready sale.

Timber of other kinds extracted under free and trade permits.

204. The quantity of timber of the reserved kinds for which free permits were issued is reported at 2,056 logs; and the quantity extracted under trade permits at 2,337 logs, equivalent to 2,361 tons.

Summary of outturn of timber from all sources.

205. The total outturn in this division from all sources, of timber of every description brought to depot and revenue-stations, may be thus summarized:—

	Logs.	Tons.
1.—Teak timber extracted by Government contractors	8,328	6,893
2.— Do. (teak) collected by Government salvors	6,818	3,049
3.— Do. from leased forests	2,444	996
Total of teak ..	17,590	10,938
4.—Timber other than teak extracted by Government contractors ..	552	280
5.—Other kinds of timber (reserved) extracted under free and trade permits	4,393	4,006
Total of other kinds of timber ..	4,945	4,286
Grand total of timber from all sources ..	22,535	15,224

Grants of teak timber under the forest rules.

206. Free grants under Rule XXI., Schedule IV., para. 4, Forest Rules of 1865, were made for 101 logs of inferior and refuse teak timber and 51 logs of pyinkadoe and pymma.

Pyinkadoe sleeper operations.

207. Four contracts were issued for 7,500 pyinkadoe sleepers, at Rs. 2-10-0 per sound piece deliverable on board steamer in the Moulmein river; but none were received within the official year, the contractors experiencing greater difficulties in the work than they had anticipated. By way of experiment, and towards ascertaining if direct measures would be as economical as the contract system, 38 pyinkadoe logs were obtained from the forests and converted at Moulmein.

Results of the transaction.

208. The results were,—

	Rs.	A.	P.
38 pyinkadoe logs, at Rs. 7	266	0	0
Conversion into 138 sleepers and 128 short sleepers ..	200	11	0
Shipping on board	21	14	0
Total cost ..	488	9	0

The local value of these sleepers is estimated as follows:—

	Rs.	A.	P.
138 sleepers, at Rs. 2-10-0 (the present contract rate) ..	362	4	0
128 short sleepers, at As. 14	112	0	0
Sale of refuse	15	0	0
Total local value ..	489	4	0

As the original cost of the Pyinkadoe timber would have been somewhat less if a larger quantity had been obtained, it is evident that the work under direct departmental agency would be a little cheaper than the contract system.

Conversion of teak timber.

209. No conversion operations took place on a large scale. Only 361 teak logs were converted, and yielded 150 squares for the Gun-carriage Factory, Bombay, and 18 squares and 14 cubic feet scantling for the Government Consulting Architect, Madras.

Crooks.

210. More attention has been paid to the extraction of crooked timber of large size; and a considerable quantity, it is expected, will be obtainable from the Thoungyeen forest outturn. Already 50 crooks have been selected and stored to meet dockyard requisitions.

Elephant labour.

211. From Appendix D., it will be seen that the cost of keep and feed of the two elephants at the Battery Point Depôt, Moulmein, has been Rs. 2,081-14-0, and value of labour performed for Government and private parties, Rs. 2,831-14-0.

Battery Point Depôt, Moulmein.

212. The new system of watching by means of a fixed establishment, instead of the chowkeedaree system as sanctioned by the local Government during the previous year, has been found to work very satisfactorily. The expenditure on salaries of establishment, *viz.*, Rs. 1,701-7-0, were thus met:—

	Rs.	A.	P.
Amount received as ground-rent and watching charges on timber removed ..	343	0	0
Drift timber watching charges: 1,522 logs, at As. 4	373	0	0
Government logs, 3,699, at As. 4	924	12	0
Do. pieces, 657, at „ 2	82	2	0
Total ..	1,722	11	0

In addition to this timber, about 500 logs padouk, 100 logs thitkadoe, and 400 logs thitka having been watched in this depôt, there will be a considerable sum as saving to the credit of the new system. It is noticeable also that no losses of timber occurred under the new system.

Disposals of timber.

213. The disposals during the year, and amounts realized, were—

	Logs.	Rs. A. P.
By auction sale of teak timber	5,220 ..	88,525 0 0
By indent or private sale of teak timber	4,860 ..	94,105 13 5
Drift timber	2,217 ..	16,231 8 0
Woods other than teak	411 ..	12,854 9 2

The sales give an average of Rs. 23-2-0 per ton on teak timber, Rs. 14-13-0 per ton on drift timber, and Rs. 60-2-8 per ton on woods of other kinds.

Compared with the previous year's sale, these figures exhibit a considerable improvement in the prices realized on teak timber in the round. The explanation of this lies in the superior quality of the Thoungyeen timber, and larger percentage of sound logs available for sale, consequent on the almost total suspension of conversion operations.

4.—Financial Results.

Salween forest division.

214. The receipts and expenditure of the Salween forest division, as exhibited in Statement No. 49, were as follow :—

	Rs. A. P.
Receipts	2,26,448 9 7
Expenditure	1,88,580 8 3
Surplus ..	37,868 1 4

If to this surplus are added—

	Rs. A. P.
Amount expended on account South Tenasserim division	18,331 8 6
Expenditure on elephants purchased for Pegu circle	4,838 0 0
or a Total of ..	23,169 8 6

the nett revenue of this division for the past year will be found to be Rs. 61,037-9-10.

Had it been possible to have disposed of 2,000 additional logs of Thoungyeen timber, the financial results would have shewn a surplus of at least Rs. 1,00,000.

Financial results of Kadoe timber, Revenue Department.

215. The following figures give the financial results in the case of the Kadoe Timber Revenue Department, which forms the special charge of the Deputy Conservator of Forests, Salween division :—

Receipts.

	Rs. A P.
Duty on British timber	3,267 1 0
Do. Foreign do.	2,26,269 7 0
From confiscated drift and waif timber	19,279 4 0
Miscellaneous receipts	2,591 0 0
Total ..	2,51,406 12 0

Disbursements.

	Rs. A. P.
Expenditure under A.	20,676 7 1
Ditto do. B.	10,477 13 0
Total ..	31,154 4 1
These figures exhibit a nett revenue for the year of ..	2,20,252 7 11

Comparison between past and previous year's financial results.

216. The following is a comparison between the receipts and disbursements of the two past years :—

	1877-78. Rs. A. P.	1878-79. Rs. A P.
Receipts	3,26,093 10 0	251,406 12 0
Disbursements	29,908 14 5	31,154 4 1
Surplus ..	2,96,184 11 7	2,20,252 7 11

Difference between receipts and disbursements.

217. The receipts consequently exhibit a decrease of Rs. 74,686-14, and the disbursements an increase of Rs. 1,245-5-8.

The first is caused by the falling off in the following items :—

	Rs.	A.	P.
1.—Duty on British timber	.. 3,650	9	0
2.— Do. Foreign do.	.. 56,663	8	0
3.—Drift timber	..11,018	4	0
4.—Miscellaneous	.. 318	14	0
Total	.. 74,686	14	0

The first two items are explained by a decrease in the outturn of British leased forests, and by 10,411 logs of foreign timber being cleared at the revenue-station less than during the previous year, as well as to the lower value of the timber, which necessarily affects an *ad-valorem* rate of duty.

The decrease in item No. 3 is due to the timber disposed of being 1,300 logs less than during the previous year; and in item No. 4, it is the result of a decrease in registration of hammer-marks. The increase in disbursements is in the pay of superior officers, an Assistant Conservator having been stationed longer at Kadoe this year.

218. Total receipts and expenditure of Salween division :—

		Rs.	A.	P.
Receipts ..	Salween forest division	.. 2,26,448	9	7
	Kadoe Timber Revenue Department	.. 2,51,406	12	0
	Grand total of Receipts	.. 4,77,855	5	7
Disbursements ..	Salween forest division	.. 1,88,580	8	3
	Kadoe Timber Revenue Department	.. 31,154	4	1
	Grand total of Expenditure	.. 2,19,734	12	4
	Total surplus	.. 2,58,120	9	3

B.—SOUTH TENASSERIM DIVISION.

2.—Protection and Improvement.

Breach of forest rules.

219. One case of breach of forest rules, in bringing down to Tavoy three thingan logs without a permit, and one case of felling two thingan trees without authority, were reported. In the former, the defendant was fined Rs. 5 by the Deputy Commissioner, Tavoy, and directed to pay the duty due; and in the latter case, two defendants were each sentenced to a fine of Rs. 10, or in default to suffer one month's simple imprisonment. Two cases of breach of forest rules were reported by the Mergui Overseer, one of which is believed to be the result of ignorance; the other case was pending at the close of the year.

Communications.

220. A small guard-house was erected, at a cost of Rs. 40, on the Tavoy river, Sinzaik, a little above Tavoy, for the use of the peons on watch at the revenue-station. A small boat was also supplied to them, at a cost of Rs. 17.

221. With the sanction of the local Government, the small schooner *Nora* was sold by auction at Moulmein. There was a fair attendance at the auction, but owing to the vessel being out of repair, and in need of fresh coppering, the highest bid obtained was only Rs. 875, or Rs. 1,375 less than her original price. She had done 2½ years' service, and was no longer required for the examination of the Mergui Archipelago; and her maintenance, moreover, entailed as much as Rs. 117-8-0 monthly expenditure, whereas that of the cutter the purchase of which has been sanctioned will be only Rs. 40-8-0 per mensem.

3.—Yield and Working.

222. The extraction from the forests of pyinkadoe, gangaw, and anan wood for conversion into sleepers, 10 ft. by 10 in. by 5 in., was continued during the past year, and resulted in the export of the following quantities of Railway sleepers to Calcutta :—

		No: of pieces.
Mergui ..	Anan 717	
	Gangaw 22	739
Tavoy ..	Pyinkadoe	5,030
	Total	.. 5,769

In addition, 31 old thingan logs were worked out under Government agency.

Contracts issued.

223. Altogether eight sleeper contracts were issued, *viz.*, for 1,300 sleepers at Mergui, and 13,000 at Tavoy. The difficulty of procuring labour in Mergui accounts for poor results there; and in the case of Tavoy a larger outturn of sleepers would have been forthcoming within the year had not the rafting of pyinkadoe timber from the sources of the Tavoy river been consider-

ably delayed for want of rain. At the close of the year a large quantity of pyinkadoe remained on the hands of the Tavoy contractors, and further supplies of sleepers are expected.

Disposals of timber

224. The 31 old thingan logs noted in the preceding para. were sold locally, and realized Rs. 240, or an average of Rs. 7-11-10 per log.

Timber extracted under free and trade permits

225. As shewn in Appendix C., free permits were issued for 337 logs at Tavoy and 75 logs at Mergui.

Under trade permits the quantities extracted were—

	Logs.
Mergui forests	118
Tavoy do	199
Total ..	317

upon which the revenue realized during the year was Rs. 1,379-0-5. As it appears that permits have been issued at Mergui for timber in tracts not included within the limits of the area subject to Act VII. of 1865, a decrease may be expected in the extraction of timber under this head, unless the provisions of the Act are extended.

Elephant establishment.

226. Of the two elephants of the Mergui establishment, one died on the 4th May 1878. The total expenditure for keep and feed amounted to Rs. 423-2-0, or on an average Rs. 35-4-2 per mensem per animal.

I.—Financial Results.

Receipts in South Tenasserim division.

227. The receipts were as follows :—

		Rs	A	P.
Receipts ..	Tavoy	2,499	9	5
	Mergui	1,689	14	2
	Total ..	4,189	7	7
Credited in Salween division account on account sale of schooner		875	0	0
	Total ..	5,064	7	7
Amount to the credit of the South Tenasserim division	228. To this should be added estimated value of sleepers shipped to Calcutta taken at a low rate. Tavoy ..	20,000	0	0
	Mergui ..	2,900	0	0
	Total to the credit of the division ..	27,964	7	7

The actual receipts, *viz.*, Rs. 4,189-7-7, were realized on purchase-money, &c., on permit timber and fees on extraction of oil and resins, and includes a small sum for sale of timber.

Expenditure in South Tenasserim division

229. The total expenditure at Mergui was—

	Rs.	A	P
A.	3,970	5	2
B.	153	7	3
Total ..	4,123	12	5
Total expenditure of Tavoy charged in Salween division, and part expenditure of Mergui for sleeper freight	18,331	8	6
Grand total of expenditure ..	22,455	4	11

The expenditure incurred by Salween division, Rs. 18,331-8-6, comprised chiefly charges on account of sleepers, the balance being made up of salaries of one Forester and three peons at Tavoy and minor charges.

Surplus.

230. From these figures, it will be seen that the South Tenasserim division may be credited with a small surplus of Rs. 5,509-2-8.

Profit on sleeper transactions.

231. The following is the account of one consignment of 100 Tavoy sleepers :—

	Rs.	A	P.
100 sleepers, at Rs 2 2-0 each	212	8	0
Freight from Tavoy to Moulmein, at Rs 8 per ton	55	8	0
Shipping at Moulmein	7	0	0
Freight to Calcutta, at Rs 10 per ton	69	7	0
Commission and charges in Calcutta, As. 9 each	56	8	0
Total ..	400	15	0
92 sleepers, valued in Calcutta at Rs. 5	460	0	0
8 do, rejected estimated, at „ 2 8 0	20	0	0
Total realizable ..	480	0	0

From this, it will be evident that at present a profit of only 12 annas per sleeper can be counted upon, and that even this depends upon very careful selection of sleepers on delivery by contractors.

KADOE TIMBER REVENUE DEPARTMENT.

2.—Protection and Improvement.

232. Nothing has to be recorded under this head, beyond that minor repairs were executed in the forest Office building, Kadoe, and a small out-house erected, at a total cost of Rs. 350-4-0.

3.—Yield of the Forests beyond the Frontier.

Foreign timber reported at the Kadoe Revenue-station.

233. During the year, foreign timber to the following extent was reported at the Kadoe station :—

	Logs.
Full-sized logs	90,130
Under-sized logs	8,065
Pieces	27,238
	125,433
Other kinds of timber	8
Total ..	125,441

234. These figures exhibit a decrease in the importation of foreign teak timber of 18,413 logs and pieces.

This falling off is reported as being due to a smaller rainfall than usual, and to early closing of the monsoon.

Importation of timber of other kinds.

235. The eight logs thitkadoe wood were only brought down for private use, and it is very doubtful whether timber of other kinds thus imported can ever compete with the produce of the British forests. Nearly all the 150 logs pine-wood (*Pinus merkusii*) imported during the previous year remain unsold, and have become almost worthless from exposure to sun and rain.

Outturn of foreign timber.

236. The outturn of foreign timber during the past four years was as follows :—

A.—*Outturn of Foreign Teak Timber during the last four years (para. 190 of Annual Report for 1876 77).*

District.	1875-76.				1876-77.				1877-78				1878-79.			
	Logs.	Tons.	Pieces.	Tons.	Logs.	Tons	Pieces.	Tons.	Logs.	Tons.	Pieces.	Tons.	Logs.	Tons.	Pieces.	Tons.
Karennee	58,230	64,053	4,628	2,962	43,366	42,781	2,812	1,800	61,884	68,036	2,983	1,491	46,208	50,509	2,164	1,082
Kyuntown	8,793	9,672	1,162	743	9,524	9,395	3,209	2,054	23,981	26,379	2,449	1,224	12,206	13,424	841	420
Hmineloongyee	27,929	30,921	282	191	18,277	18,030	169	108	14,285	15,714	385	192	7,914	8,702	96	48
Thoungyeen	25,846	28,430	4,990	3,193	28,114	27,735	9,438	6,040	20,239	22,213	9,153	4,576	26,706	27,398	23,771	11,885
Dahquin	6,163	6,779	81	52	6,380	6,294	649	415	4,918	5,409	183	91	4,400	4,723	366	183
Sittang	505	555	..	..	2,552	2,518	..	..	3,386	3,724	..	..	761	837	..	..
Total ..	127,466	140,410	11,143	7,141	108,213	106,753	16,277	10,417	128,693	141,475	15,153	7,574	98,195	105,593	27,238	13,618

Comparative statement of the outturn of foreign timber.

237. The following is a comparative statement of the outturn of foreign timber during the past and previous years:—

B.—*Comparative statement of the outturn of Foreign Timber from Foreign States by that of previous year.*

District.	Description of timber.	1877-78.	1878-79.	Remarks.
Karennee	Full-sized	61,761	45,142	Logs.
	Under-sized	123	1,066	1877-78 128,698
	Pieces	2,983	2,164	1878-79 98,196
Kynetown	Full-sized	23,981	12,199	Decrease .. 30,498
	Under-sized	..	7	
	Pieces	2,149	841	
Hmineloongyee ..	Full-sized	14,285	7,905	Pieces.
	Under-sized	..	9	1877-78 15,153
	Pieces	385	96	1878-79 27,238
Thoungyeen	Full-sized	20,070	20,112	Increase .. 12,085
	Under-sized	169	6,594	
	Pieces	9,153	23,771	
Dahquin	Full-sized	4,916	4,011	
	Under-sized	..	389	
	Pieces	185	366	
Upper Burma, Nyingyan	Full-sized	3,386	761	
	Under-sized	..	..	
	Pieces	..	..	

Drift timber operations.

238. The drift timber operations of the year resulted in the salving and delivering at the Kadoe and Battery Point Depôt of 6,818 teak logs, or 2,484 more than during the previous year.

The 6,818 logs include 566 logs and pieces, but mostly the latter, from the seashore, which gives a decrease in that branch of salving of 271 logs and pieces. This is attributed to the monsoon having been milder than in the year previous, and to the salvors being able to capture larger quantities of timber within the Salween river.

The increase of 2,705 logs and pieces in river salving is chiefly owing to the bank salvors at Meebong bringing a large quantity of timber to the Kadoe Depôt which had been left unclaimed on their hands.

Disposals of drift timber.

239. Out of these 6,818 logs and pieces, and a balance of 2,652 logs on hand at the commencement of the year, 1,038 superior logs were made over to claimants, 2,217 inferior logs and pieces were sold, and 115 used for depôt and other Government purposes, being utilized chiefly as posts for the securing of rafts, &c. In the quantity of timber claimed there has been a decrease of 277 logs, although there has been an increase in the collections during the past year. This fact is explained by the reduced circumstances of most of the importers, who, having no money with which to release their timber at the river salving-stations, are compelled to let Government deal with it and to claim it when purchasers are forthcoming.

Financial result of drift timber operations.

240. The total expenditure incurred on these operations was Rs. 19,600-3-0; and as the receipts amounted to only Rs. 19,279-4-0, the result has been a deficit of Rs. 328-15-0.

This however is only an apparent and not an actual deficit, as there were 1,293 logs less disposed of than during the previous year, and a larger balance on hand of 3,448 logs.

Registration of hammer-marks.

241. During the year, the registration of 143 marks was renewed and 109 new marks were registered, which, together, realized a total of Rs. 2,520, or Rs. 800 less than during the previous year.

There was a decrease of 31 in the number of old marks renewed, which is due to the present unfavourable condition of the trade.

The difference in the number of new marks registered will be seen, from the following figures, to have been very slight:—

	1877-78.	1878-79.
New marks	.. 108	109
Old do.	.. 174	143

Register of licenses.

242. The register of licenses to collect timber on the Salween shews 800 permits (Schedule X.) issued to 286 different parties.

4.—Financial Results.

Financial results.

243. These have already been noted in paragraph 215 under Salween division.

SECTION IV.—GENERAL.

Exports and imports of teak timber, Rangoon.

244. During the year, 30,612½ tons of teak were exported from Rangoon, shewing a decrease of 7,322½ tons as compared with the previous year:—

Exports and Imports of Teak Timber during 1878-79.

Ports.	Tons.	Value.
		Rs.
United Kingdom	13,146	9,48,328
Germany	76	6,800
Arabia	40	3,000
Ceylon	812	56,960
Straits Settlements	156	10,580
Other countries in Asia (Sumatra)	17	1,000
Total	14,247	10,26,668
Bengal	6,407½	4,63,955
Bombay	9,161	6,44,788
Madras	559	36,553
Ports within the province	288	16,053
Total	16,365½	11,61,349
Grand Total	30,612½	21,88,012

Exports and imports of teak from Moulmein.

245. The exports of teak timber from Moulmein amounted during the year to 103,207 tons to the following countries:—

		Tons.	Value: Rs.
Germany		3	186
United Kingdom		16,287	11,71,979
Spain		1,235	86,754
Mauritius		1,388	99,553
Ceylon		1,068	70,755
Straits Settlements		727	58,340
Other countries in Asia: Sumatra		668	68,448
Bengal	Calcutta	31,314	19,10,797
	Other ports	819	36,291
Bombay	Bombay	26,417	15,83,460
	Other ports	..	..
Madras	Madras	11,153	4,78,323
	Other ports	8,978	4,02,424
Provincial ports		2,900	1,54,945
Pondicherry		255	10,200
Total		103,207	61,32,455

The foregoing statement shews a decrease of 20,035 tons over the quantity exported last year, when both freight and price of timber were comparatively low.

Exports of other woods from Moulmein.

246. The following are the exports from Moulmein of woods of other kinds:—

	Tons.	Value: Rs.
United Kingdom	31	1,115
Bengal—Calcutta	1	53
Bombay—Bombay	..	..
Provincial ports	117	4,279
Total	149	5,447
Madras—Madras	24	300
Provincial ports	10	120
Bombay—Bombay	2	18
Total	36	438
Grand Total	185	5,885

247. The following figures represent the teak timber imported during the year into the Pegu forest circle:—

	Logs.	Tons.
By the Sittang	47,134	45,249
„ the Irrawaddy	6,406	6,150

The following are the imports of teak and other timber into the port of Moulmein during the year:—

	Tons.	Value: Rs.
Teak	14	420
Other woods	17	577
Total ..	31	997

Of minor forest produce, the following were imported:—

		Value: Rs.
Cutch	cwt. 693	6,030
Stick-lac	„ 2	21
Vegetable oils	galls. 69,555	1,09,756
Total ..		1,15,807

248. The exports of minor forest produce from Rangoon and Moulmein are shewn in the subjoined table:—

Exports of minor forest produce.

Articles.	Whither exported.	Moulmein.		Rangoon.	
		Quantity.	Value.	Quantity.	Value.
			Rs.		Rs.
Caoutchouc, raw .. Cwt.	United Kingdom	..	..	1,931	1,86,013
Ditto, manufactured Rs.	Straits Settlements	..	..	..	45
Gums and resins.					
Cutch and gambier .. Cwt.	United Kingdom	..	..	117,769	9,88,631
	Egypt	..	..	1,267	12,605
	Ceylon	..	..	400	4,531
	Straits Settlements	..	..	46,026	3,62,199
	Bengal	..	..	62,678	5,72,672
	Bombay	2	18	28	308
	Madras	24	300	6,403	48,007
	Provincial ports	10	120	389	5,391
	Total ..	36	438	236,891	20,80,402
Other sorts .. .. Cwt.	United Kingdom	..	..	874	8,099
	Straits Settlements	..	..	2	150
	Total ..	..	..	876	8,249
Lac, stick .. .. Cwt.	United Kingdom	..	..	138	1,813
	China	..	..	75	748
	Straits Settlements	188	1,616	480	4,893
	Bengal	..	..	3,619	32,142
	Bombay	..	..	38	295
	Madras	..	..	1,496	14,067
	Provincial ports	44	514	88	1,475
	Total ..	232	2,130	5,934	55,433
Oils, vegetable .. Galls.	United Kingdom	58	145	142	291
	Straits Settlements	..	..	112	209
	Bengal	..	..	48	157
	Bombay	..	..	110	138
	Madras	444	305	5,775	5,413
	Provincial ports	43,185	81,067	4,180	6,938
	Total ..	43,687	81,517	10,667	13,146
Spices. Cardamoms .. Lbs.	Straits Settlements	..	..	1,788	1,373
	Bengal	..	..	200	800
	Madras	5,146	3,133	22,949	13,005
	Provincial ports	11,747	5,610	..	..
	Total ..	16,893	8,743	24,937	15,278
Wax (excluding candles) .. Cwt.	Straits Settlements	..	..	300	23,490
	Provincial ports	..	..	5	471
	Total ..	..	..	305	23,961

Interchange of seeds, plants, &c.

249. A collection of orchids of the varieties common to the Pegu forest circle were supplied to the Vice-President of the Queensland Acclimatization Society, and are reported to have been received in excellent condition.

Bael seedlings.

250. Nineteen bael seedlings were supplied to the Civil Surgeon, Moulmein, for planting in the compound of the civil dispensary at Moulmein.

Teak-seed supplied under requisition.

251. The following requisitions for teak-seed were met during the year: for the Deputy Conservator, Assam, 20 maunds; Assistant Conservator, Chittagong, 21¾ maunds; Deputy Commissioner, Akyab, three maunds; Commissioner, Ajmere, two seers.

Bamboo-seed supplied under requisition.

252. A few pounds of bamboo-seed (myin-wa and theik-wa) were also forwarded to the Government Botanist at Melbourne.

Bamboo shoots for paper-stock.

253. Two thousand bamboo shoots for the manufacture of paper-stock were received from the Rangoon and Tharrawaddy divisions, and made over to Mr. Routledge's agent to be crushed by his machine set up at the Saw-mill at the Central Jail, Rangoon.

W. J. SEATON, MAJOR,

Conservator of Forests.

APPENDICES.

Form No. 45.—*Area of Reserved Forests for the year 1878-79.*

Division or Range	Name of Forest, and Civil District or Territory.	Area on 1st April 1878.		Added during the year.		Excluded or transferred to other heads.		Total on 31st March 1879.		Number and date of Notification of additions and transfers, &c.	Remarks.
		Square miles.	Acres	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.		
Salween	Sinzway ... ... (Salween District.)	14	8,960	...	..	...	...	14	8,960	.....	
	Wahmoo choung ... (Salween District.)	3	1,920	...	...	...	...	3	1,920	.....	
	Mainanway ... ... (Salween District.)	6	3,840	...	..	...	...	6	3,840	.....	
	Kaheeloo ... .. (Salween District.)	15	9,600	...	...	...	...	15	9,600	.....	
	Oankangyee ... .. (Shwe-gyeen District.)	13	8,320	...	...	..	...	13	8,320	.....	
	Maiwyne ... ... (Shwe-gyeen District.)	13	8,320	...	...	...	...	13	8,320	.....	
	Beelakatgyee ... (Shwe-gyeen District.)	13	8,320	...	...	...	...	13	8,320	.....	
	Taçaloung ... ... (Amherst District.)	8	5,120	..	.	...	..	8	5,120	.....	
	Dalee ... . (Amherst District.)	...	...	12	7,680	...	...	12	7,680	90F., dated 15th August 1878.	
	Hpakaboh ... .. (Amherst District.)	...	...	32	20,480	...	...	32	20,480	105F., do. 7th October 1878.	
	Kyoon-choung ... ... (Amherst District.)	..	...	17	10,880	...	...	17	10,880	106F., do. do. do.	
	Maiplai ... ... (Amherst District.)	..	..	20	12,800	...	...	20	12,800	107F., do. do. do.	
	Maoo ... .. (Amherst District.)	...	..	14	8,960	...	...	14	8,960	116F., do. 19th November 1878.	
	Thinganneenoung ... (Amherst District.)	..	..	9	5,760	...	...	9	5,760	117F., do. do. do.	
	Megwa .. ... (Amherst District.)	...	...	19	12,160	...	...	19	12,160	116F., do do. do.	
	Goongyee ... ... (Amherst District.)	..	...	43	27,520	...	...	43	27,520	119F., do. do. do.	
	Total, Tenasserim Circle ..	85	54,400	166	106,240	...	...	251	160,640		

Form No. 45—continued.

Division or Range.	Name of Forest and Civil District or Territory.	Area on 1st April 1878.		Added during the year.		Excluded or transferred to other heads.		Total on 31st March 1879.		Number and date of Notification of additions and transfers, &c.	Remarks.
		Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.		
	East Thayetmyo District.										
Myaldey Range.	Teindau	5	2,880	...	...	...	...	5	2,880		
	Tsatsoowa	7	4,800	...	...	...	...	7	4,800		
	Thabyeehla	12	8,000	...	...	...	...	12	8,000		
	Bangon	3	1,920	...	...	...	...	3	1,920		
	Total	27	17,600	...	...	...	...	27	17,600		
	Prome District.										
Prome. Nawing Range.	Thitkat'Ayoh-doung	5	2,944	...	...	...	...	5	2,944		
	Thayet choung and Nyoungbindet	8	4,864	...	...	...	...	8	4,864		
	Quaimeedoh	4	2,442	...	...	...	...	4	2,442		
	Nabaibyoo	6	3,840	...	...	...	...	6	3,840		
	Shwe-loung and Pwaigin	21	13,120	...	...	...	...	21	13,120		
	Gwaicho	10	6,720	...	...	...	...	10	6,720		
	Choungzonk	15	9,408	...	...	...	...	15	9,408		
	Shwe-kyundau	...	256	...	...	...	...	...	256		
	Prome plantation	...	64	...	...	...	...	...	64		
	Wapyoo	2	1,536	...	...	...	...	2	1,536		
	Meedoh	3	1,920	...	...	...	...	3	1,920		
	Thitwah	4	2,500	...	...	...	...	4	2,500		
	Singoung	5	3,392	...	...	...	...	5	3,392		
	Pwotkya	3	2,176	...	...	...	...	3	2,176		
	Thapan choung	5	3,140	...	...	...	...	5	3,140		
	Loothay	1	640	...	...	...	...	1	640		
	Loobone	1	896	...	...	...	...	1	896		
	Bamboung	2	960	...	...	...	...	2	960		
	Oopanlangyee Oopanlangalay Yeatha	4	2,304	...	...	...	...	4	2,304		
	Htonyea	19	12,224	...	...	...	...	19	12,224		
	Pouktau	7	4,672	...	...	...	...	7	4,672		
	Simmesway	10	6,400	...	...	...	...	10	6,400		
	Total	135	86,418	...	...	...	...	135	86,418		
	Total, Prome	162·5	104,018	..	...	...	...	162·5	104,018		

FORM No. 45—continued.

DIVISION OR RANGE.	Name of Forest, and Civil District or Territory.	AREA ON 1ST APRIL 1878.		ADDED DURING THE YEAR.		EXCLUDED OR TRANSFERRED TO OTHER HEADS.		TOTAL ON 31ST MARCH 1879.		Number and date of Notification of additions and transfers, &c.	REMARKS.
		Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.		
	Prome District.										
THARRAWADDY. Shwelay Range.	Danlay	3	1,800	...	...	...	...		1,800	.....	
	Padet myoung	7	4,500	...	...	...	...	7	4,500	.....	
	Kyoukyee doung	4	2,600	...	...	...	...	4	2,600	.....	
	Bwet	5	2,900	...	...	...	...	5	2,900	.....	
	Gwai-douk-queng	16	10,200	...	...	...	...	16	10,200	.....	
	Kyoo-byoo	3	2,200	...	...	...	...	3	2,200	.....	
Toungnyo Range.	Kadinzouk and Kadinthongzin	6	3,500	...	...	...	...	6	3,500		
	Shaboung or Kokee	3	2,200	...	...	...	...	3	2,200	.....	
	Upper Padungben	1	600	...	...	...	...	1	600	.....	
	Lower do.	...	200	...	...	...	...	...	200	.....	
										.....	
	Henzada District										
	Upper Thapan	2	1,000	4	2,560	...	...	7	4,260	.....	
	Lower do.	1	700								
	Nyanlay	9	5,800	...	...	...	...	9	5,800	.....	
	Paxinjay	2	1,300	...	...	...	...	2	1,300	.....	
Minlooo Range.	Kannee	1	800	...	...	...	...	1	800	.....	
	Toungnyo hill	6	3,500	2	1,280	...	...	8	4,780	.....	
	Upper Pyahgyee	2	1,000	...	...	...	...	2	1,000	.....	
	Lower do.	1	600	...	...	...	...	1	600	.....	
	Thitcho	2	1,400	...	...	...	...	2	1,400	.....	
	Kangyee	6	3,800	...	...	...	...	6	3,800	.....	
	Gway-douk-tsan	2	1,300	...	...	...	...	2	1,300	.....	
	Choung-wah	1	700	...	...	...	...	1	700	.....	
	Choung-zouk	6	3,700	...	...	...	...	6	3,700	.....	
	Myodwin	...	38	...	...	...	...	...	38	.....	
	Thongzai	70	44,800	...	...	...	...	70	44,800	.....	
	Koon Beeling	20	12,800	...	...	...	...	20	12,800	.....	
	Mokkha and Kadin Beeling	22	14,100	120	76,800	...	...	142	90,900	No. 41F., dated 16th April 1878.	
	Minhla Gamoung and Toung		...	140	89,600	...	...	140	89,600	„ 42F., do. do.	
	Mimboo Bobea	...	...	130	83,200	...	...	130	83,200	„ 43F., do. do.	
	Shwelay Yoma	...	...	52	33,600	...	...	52	33,600	„ 88F., do. 8th August 1878.	
	Toungnyo Yoma	...	...	138	88,320	...	...	138	88,320	.....	
	Htouk-kyan	...	...	7	4,640	...	...	7	4,640	No. 96F., dated 30th August 1878.	This reserve was sanctioned towards the close of the official year, but has not been yet notified.
	Thako-lan	...	...	1	960	...	...	1	960	„ 97, „ 27th do. do.	
	Total	201	128,038	594	380,960	...	...	795	508,998		
	Carried over	201	128,038	594	380,960	...	...	795	508,998		

Form No. 45—concluded.

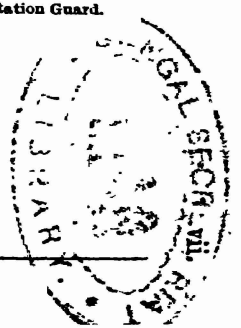
Division or Range.	Name of Forest, and Civil District or Territory.	Area on 1st April 1878.		Added during the year.		Excluded or transferred to other heads.		Total on 31st March 1879.		Number and date of Notification of additions and transfers, &c.	Remarks.
		Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres	Square miles.	Acres.		
	Brought forward ...	201	128,038	594	380,960	...	...	795	508,998		
	Myanoung District.										
Tharrawaddy	Hsatpoke (fuel)	7	4,700	...	...	...	...	7	4,700		
	Tsitquin do.	4	2,700	...	...	...	...	4	2,700		
	Choungnagoon	...	300	...	...	...	...		300		
	Henzada District.										
	Thendawyo (fuel)	10	6,400	..	...	...	...	10	6,400		
	Total ...	21	14,100	..	...	...	...	21	14,100		
	Total, Tharrawaddy	222	142,138	594	380,960	...	...	816	523,098		
	Rangoon District.										
Rangoon	Kyetpyoogan	3	1,800	..	...	...	...	3	1,800		
	Khadat	100	64,000	..	...	...	...	100	64,000		
	Magayee	20	12,800	..	...	...	...	20	12,800		
	Total ...	123	78,600	...	...	...	...	123	78,600		
	Hmaubee choung (fuel)	3	1,700	...	...	...	...	3	1,700		
	Thitpyat do. do.	5	3,100	...	...	...	...	5	3,100		
	Kyoon do. do.	13	8,600	...	...	...	...	13	8,600		
	Thaboo do. do.	12	8,000	...	...	...	...	12	8,000		
	Total ...	33	21,400	...	...	...	...	33	21,400		
	Total, Rangoon ...	156	100,000	...	...	...	...	156	100,000		
	Toungoo District.										
Sittang	Pyoon choung	5	3,400	...	...	...	...	5	3,400		
	Kannee do.	...	60	...	...	...	...	..	60		
	Yaynay do.	9	5,800	...	...	...	...	9	5,800		
	Total, Sittang ...	14·5	9,260	...	...	...	...	14·5	9,260		
	Shwe-gyeen District.										
Shwe-gyeen	Binbyee	10	6,400	...	...	...	...	10	6,400		
	Total, Pegu Circle ...	565	361,816	594	380,960	...	...	1,159	742,776		
	Grand Total ...	650	416,216	760	487,200	...	...	1,410	903,416		

Form No. 45.—*Area of Unreserved Forests for the year 1878-79.*

Division or Range.	Name of Forest and Civil District or Territory.	Area on 1st April 1878.		Added during the year.		Excluded or transferred to other heads.		Total on 31st March		No. and date of Notification of additions and transfers, &c.	Remarks.
		Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.		
Fifteen species of trees are reserved throughout the greater part of the province, but the actual extent of the forests over which they are distributed is unknown.											

FORM No. 46.—[PRESCRIBED] *Area of Plantations for the year 1878-79.*

DIVISION.	Name of Plantation.	ON 1ST APRIL 1878.		DURING 1878-79.		ON 31ST MARCH 1879.		REMARKS.
		Area.	Total cost.	Area added.	Cost.	Total Area.	Total Cost.	
		Acres.	Rs. A. P.	Acres.	Rs. A. P	Acres.	Rs A. P.	
SALWEEN	Thinganneenoung	10	14,965 10 8	...	27 10 0a	10	14,993 4 8	a Cost of thinning.
	Shwe-goon	5	3,786 12 4	...	.....	5	3,786 12 4	
	Koloon Island	2	3,538 15 8	...	.....	2	3,538 15 8	
	Total, Tenasserim Circle	17	22,291 6 8	...	27 10 0	17	22,319 0 8	
PROME	Prome plantation	73	8,932 0 0	...	35 0 0b	73	8,967 0 0	b Cost of fire protection.
RANGOON	Kyet-pyoogan	683	74,812 0 0	...	361 0 0	683	75,173 0 0	
	Mugayee	1,306	93,947 0 0	...	10,476 0 0	1,306	1,04,423 0 0	
THARRAWADDY	Choungwah	340	34,727 0 0	...	.	340	34,727 0 0	
	Quaymaking	144	15,791 0 0	...	60 0 0c	144	15,851 0 0	c Pay of Plantation Guard.
	Myodwin	10	431 0 0	..	.....	10	431 0 0	
SITTANG	Kannee	70	1,373 0 0	...	.....	70	1,373 0 0	
	Pyoon Choung	696	24,260 0 0	...	61 0 0d	696	24,321 0 0	d Weeding.
	Total, Pegu Circle	3,322	2,54,273 0 0	...	10,993 0 0	3,322	2,65,266 0 0	
	GRAND TOTAL	3,339	2,76,564 6 8	...	11,020 10 0	3,339	2,87,585 0 8	



FORM No. 47.—*Area of Forest Tracts protected from fire during the dry season of 1879 (to accompany Report for 1878-79).*

DIVISION.	FOREST TRACT.	UP TO 30TH JUNE 1878.		DURING DRY SEASON 1879.				TOTAL COST TO 10TH JUNE 1879.	YEAR WHEN COMMENCED.	REMARKS.
		Area actually protected.	Cost up to 30th June 1878.	Area attempted.	Failures.	Actually protected.	Amount expended.			
			Rs. A. P.				Rs. A. P.	Rs A. P.		
SALWEEN.	*Foonsaleen—*									
	Sinzway	8,960	410 0 0	8,960	...	8,960	860 1 0	1,270 1 0	1871	
	Wamoo	,440	20 0 0	1,440	1,200	240	..	20 0 0	1871	
	Kaheeloo	...	. .	1,280	...	1,280	20 0 0	20 0 0	1878	
	Doomdamee—									
	Tagayloung	1,024		..	...		.		1877	
	Beelakatgyee	2,060	366 15 0	.	...		.	421 15 0	1877	
	Oankangyee	4,160		8,320	...	8,320	55 0 0		1877	
	Beeling—									
	Maiwyne	8,320	61 0 0	8,320	...	8,320	30 8 0	91 8 0	1877	
	Mainanway	3,840	.....	3,840	...	3,840	3 0 0	3 0 0	1878	
	Attaran—									
	Dalee	610	30 0 0	610	...	610	.....	30 0 0	1878	
	Total, Tenasserim Circle ...	30,634	887 15 0	32,970	1,200	31,770	968 9 0	1,856 8 0		

	Rs. A. P.
Charged in previous years ...	120 12 0
Do. do. 1876-77 ...	298 15 0
Do. do. 1877-78 ...	468 4 0
Do. do. 1878-79 ...	968 9 0
Total ...	1,856 8 0

Form No. 47—concluded.

Division.	Forest Tract.	Up to 30th June 1878. Area actually protected.	Up to 30th June 1878. Cost up to 30th June 1878.	During dry season 1879. Area attempted.	Failures.	Actually protected.	Amount expended.	Total cost to 10th June 1879.	Year when commenced.	
			Rs. A. P.				Rs. A. P.	Rs. A. P.		
Tharrawaddy	*Mokkha Beeling*—									
	Reserve	14,060	8,981 0 0	14,180	..	14,180	934 0 0	9,915 0 0	1873	
	Boben	670	2,583 0 0	614	...	614	195 0 0	2,778 0 0	1869	
	Myodwin	...	378 0 0	40	...	40	34 0 0	412 0 0	1869	
	Bwet	2,886	1,825 0 0	2,886	960	1,926	668 0 0	2,493 0 0	1877	
	Kangyee	3,679	4,048 0 0	3,801	...	3,801	1,043 0 0	5,091 0 0	1877	
	Nyanlay	5,840	6,491 0 0	5,840	600	5,240	1,055 0 0	7,546 0 0	1877	
	Mokkha	...	.....	38	...	38	50 0 0	50 0 0	1879	
	Minhla	...	.....	232	3	229	275 0 0	275 0 0	...	
	Gwaydouktsan	...	.....	26	...	26	50 0 0	50 0 0	...	
	Thongzai	...	.....	92	...	92	50 0 0	50 0 0	...	
Rangoon	Magayee	1,136	11,598 0 0	1,690	25	1,665	2 631 0 0	14,590 0 0	1872	
	Kyetpyoogan	...		683	683	...	361 0 0		1868	
Toungoo	Pyoon choung	3,440	2,659 0 0	3,440	7	3,433	462 0 0	3,121 0 0	1877	
	Yaynay	5,760	1,001 0 0	5,760	...	5,760	629 0 0	1,630 0 0	1877	
Prome	Teak plantation	73	4.522 0 0 *a*	75	...	75	35 0 0	4,932 0 0	1877	
	Gwayeho	...		...	...	...	... ...			
	Choungzouk	...		2,500	67	2,433	375 0 0		1879	
	Total, Pegu Circle ...	37,564	44,086 0 0	41,997	2,345	39,552	8,647 0 0	52,933 0 0		
	Grand Total ...	68,198	44,973 15 0	74,867	3,545	71,322	9,815 9 0 *b*	54,789 8 0		

a Rs. 60 included in 4,522, but not shewn in last year's statement.

b Rs. 60 included in 4,522, but not shewn in last year's statement.

	Rs. A. P.
Charged in previous years ...	19,493 0 0
Do. do. 1876-77 ...	16,370 0 0
Do do. 1877-78 ...	8,163 0 0
Do. do. 1878-79 ...	8,907 0 0
Total ...	52,933 0 0

FORM No. 48 [PRESCRIBED] *Prosecutions for Breaches of Forest Rules for the year 1878-79.*

FOREST DIVISION AND CIVIL DISTRICT.	Injury to forests by fire.		Unauthorised felling or appropriation of wood and minor forest produce.		Grazing without permission or in tracts in which grazing is prohibited.		Other offences.		TOTAL. Prosecutions.		TOTAL. Convictions.		REMARKS.
	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
TENASSERIM CIRCLE.													
	...	..	...	...	...	...	40	42	40*a*	42	36	38	*a* 2 cases pending.
	...	...	...	..	...	...	12	24	12	24*b*	9	14	*b* 2 persons absconded.
	...	...	...	...	...	...	8	10	8	10	5	7	
	...	...	...	...	...	...	1	1	1	1	...	...	
Salween Division—	...	...	...	...	...	...	1	1	1	1	1	1	
Amherst district	...	...	...	...	...	...	1	1	1	1	1	1	
	...	...	...	...	...	...	1	1	1	1	1	1	
	...	...	...	...	...	...	2	2	2	2	2	2	
	...	...	...	...	...	...	1	1	1	1	1	1	
	...	...	...	...	...	...	1	1	1	1	1	1*c*	*c* After trial transferred to the District Magistrate for enhanced punishment.
	...	...	1	1	...	...	...	...	1	1	1	1	
	...	...	19*d*	19	...	...	...	...	..	...	...	...	
	...	...	1	1	...	...	...	...	1	1	1	1	*d* Result unknown.
Total ...	...	...	21	21	...	...	68	84	70	86	59	68	
South Tenasserim Division—													
Tavoy district	...	...	1	1	...	...	1	1	2	2	2	2	
Total, Tenasserim Circle ...	...	...	22	22	...	...	69	85	72	88	61	70	
PEGU CIRCLE.													
Tharrawaddy Division—													
Tharrawaddy Civil district ...	...	...	...	...	...	...	1	2	1	2	1	2	
Prome Do. do. ...	...	...	1	21	...	...	...	.	1	21	1	21	
Prome Do. do. ...	...	...	1	4	...	...	...	...	1	4	1	4	
Total ...	...	...	2	25	...	...	1	2	3	27	3	27	
Rangoon Division—													
Rangoon Civil district	...	...	3	3	...	...	...	...	3	3	3	3	
Shwe-gyeen Division—													
Shwe-gyeen	...	...	1	1	...	...	...	...	1	1	...	...	
Western Division—													
Myanoung Civil district	...	...	2	2	...	...	2	2	4	4	4	4	
Prome Division—													
Prome Civil district	...	...	1	2	...	...	...	...	1	2	1	2	
Nawing Forest	...	...	...	...	...	...	...	...	...	...	...	...	
Thayetmyo Civil district ...	...	...	5	22	...	...	...	...	5	22	5	19	One man acquitted; two men, natives of Burma Proper, not forthcoming.
Mindoon Forest	...	...	1	3	...	...	...	...	1	3	1	3	
Meaday Do.	...	...	7	27	...	...	...	.	7	27	7	24	
Total ...	...	...											
Toungoo Division—													
Toungoo Civil district	...	...	1	1	...	...	...	...	1	1	1	1	Fined Rs. 50.
Total, Pegu Circle ...	...	...	16	59	...	...	3	4	19	63	18	59	
GRAND TOTAL ...	...	...	38	81	...	...	72	89	91	151	79	129	

FORM No. 49.—[PRESCRIBED] *Summary of Revenue of the different Divisions for the year 1878-79.*

Budget Heads.	Direction.	Agency Division.	Rangoon Division.	Tharrawaddy Division.	Prome Division.	Westorn Division.	Sittang Division	Shwe-gyoen Division.	Total, Pegu Circle.	Salween Division.	Kadoe Division.	South Tenasserim Division	Total, Tenasserim Circle.	Total, British Burma.
RECEIPTS.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—														
a Timber	.....	4,61,027 2 9	.....	4,338 7 9	10,184 8 3	6,197 8 0	2,707 6 0	347 8 0	4,85,302 8 9	2,12,428 11 8	.....	386 9 11	2,12,815 5 7	6,98,207 14 4
b Firewood and Charcoal	.....	.....	.....	.....	.....	.....	.....	.....	.....	245 11 0	.....	.....	245 11 0	245 11 0
c Bamboo	.....	75 4 0	.....	.....	.....	.....	.....	.....	75 4 0	.....	.....	.....	.....	75 4 0
d Sandal-wood	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
e Grass and other minor produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS.—														
a Timber	.....	320 9 9	30,080 2 11	9,500 11 2	7,413 3 0	6,056 14 2	4,307 4 11	2,027 3 4	63,005 1 3	10,838 2 11	3,207 1 0	2,008 0 1	16,713 4 0	79,718 5 3
b Firewood and Charcoal	.....	.....	104 0 0	347 10 6	65 9 6	468 7 0	48 0 0	577 0 0	1,085 11 0	.....	.....	.....	.....	1,085 11 0
c Bamboos	.....	.....	.....	403 1 0	.....	.....	.....	.....	403 1 0	.....	.....	.....	.....	403 1 0
d Grazing and fodder grass	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
e Other minor produce	.....	.....	1,612 13 0	871 12 3	10,924 0 0	1,430 4 0	1,398 0 0	838 0 0	17,013 13 9	60 0 0	.....	1,085 0 0	1,145 0 0	18,158 13 3
III.—CONFISCATED, DRIFT AND WAIF WOOD	.....	10,090 2 0	231 5 0	784 15 9	150 6 3	6,181 11 0	30,579 4 0	484 4 0	49,408 0 0	.....	19,279 4 0	12 4 0	19,291 8 0	68,699 8 0
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—														
a Duty on Foreign timber and other Forest produce ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,26,209 7 0	.....	2,26,209 7 0	2,26,209 7 0
b Revenue from shared and private forests ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
V.—MISCELLANEOUS:—														
a Fines and forfeitures	.....	.....	.....	.....	40 0 0	.....	420 0 0	90 0 0	500 0 0	1,149 0 0	.....	.....	1,149 0 0	1,649 0 0
b Refunds	.....	79 0 7	93 1 4	620 3 9	.....	20 0 0	26 7 0	6 7 0	838 3 8	.....	.....	.....	.....	838 3 8
c Other sources	.....	2,570 5 8	.....	34,421 5 11	40 8 8	12 0 1	6 1 0	145 6 6	37,195 11 10	1,727 0 0	2,501 0 0	97 9 7	4,415 9 7	41,611 5 5
Total ...	.....	4,75,604 8 9	32,781 6 8	51,366 4 1	28,824 3 8	22,300 12 3	39,492 0 11	5,053 12 10	6,55,517 6 9	2,26,448 9 7	2,51,406 12 0	4,189 7 7	4,82,044 13 2	11,37,562 3 11

APPENDICES

M.

FORM No. 49—*Summary of Expenditure of the different divisions for the year 1878-79.*

Budget Heads.	Direction.	Agency Division.	Rangoon division.	Tharrawaddy Division.	Prome Division.	Western Division	Sittang Division.	Shwe-gyeen Division.	Total, Pegu Circle	Salween Division.	Kaloe.	South Tenasserim Division.	Total, Tenasserim Circle	Total, British Burma.
A.—CONSERVANCY AND WORKS.	Rs A. P.	Rs. A. P.	Rs A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs A. P.	Rs. A. P.	Rs. A. P.	Rs A. P	Rs. A P.	Rs. A. P.	Rs. A. P
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—														
a Timber		17,909 0 10	5,778 14 0	84,138 12 6	74,061 14 6	9,811 4 6	53,932 6 10	2,705 6 5	2,49,342 11 7	1,06,267 7 5	219 0 0	3,022 6 11	1,09,508 14 4	3,58,851 0 11
b Firewood and charcoal														
c Bamboos														
d Sandal-wood				450 0 0					450 0 0					450 0 0
e Grass and other minor produce														
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS		527 14 9	1,891 3 6	792 6 6	1,148 8 0	1,038 13 3		911 11 0	6,190 9 0	5 0 0			5 0 0	6,195 9 0
III.—CONFISCATED, DRIFT AND WAIF WOOD		3,844 6 1	659 8 6	100 0 0	188 0 0	2,013 5 0	14,207 8 0	630 12 0	21,622 7 7		19,600 3 0		19,600 3 0	41,422 10 7
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—														
a Duty on foreign timber and other forest produce														
b Revenue from shared and private forests														
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHARE-HOLDERS IN FORESTS MANAGED BY GOVERNMENT														
VI.—LIVE AND DEAD STOCK—														
a Purchase of cattle		8,150 0 0		1,000 0 0					9,150 0 0	6,375 0 0			6,375 0 0	15,525 0 0
b Feed and keep of cattle		9,158 11 1	1,884 11 8	3,345 4 7	1,206 11 9	674 8 10	1,001 13 8	356 15 0	17,780 12 7	2,446 14 0		407 0 3	2,853 14 3	20,634 10 10
c Plant, tools and instruments		1,894 13 6	615 8 0	19 0 0	8 10 0	428 0 0	213 6 0	80 2 0	3,009 7 6	920 12 6	331 0 1	175 4 0	1,427 0 7	4,526 8 1
VII.—COMMUNICATIONS AND BUILDINGS—														
a Roads and bridges		40 0 0	66 4 0	6 8 0	6 8 0				1,119 4 0					119 4 0
b Buildings		4,477 1 0	1,177 4 9	1,979 11 0	1,272 0 0		22 14 3	456 0 0	9,384 15 0	1,719 15 0	526 4 0	141 10 0	2,387 13 0	11,772 13 0
c Other Works		39 14 9	742 7 0	878 4 0	28 0 0				1,688 9 9	44 8 0		6 0 0	50 0 0	1,739 1 9
VIII.—DEMARCATION, IMPROVEMENT AND EXTENSION OF FORESTS—														
a Demarcation		767 1 11	477 8 6	4,554 9 7	473 2 0		441 8 10		6,713 14 9	5,015 8 6			5,015 8 6	11,729 7 3
b Compensation for land and rights		200 0 0		300 0 0					500 0 0	15 6 3			15 6 3	575 6 3
c Surveys and working plans		75 0 0	124 0 0				6 0 0		205 0 0	14 0 0		17 8 0	31 8 0	236 8 0
d Plantations		64 12 10	7,703 11 0	1,873 12 10	114 12 0		1,402 2 2		11,270 2 10	1,718 1 0			1,718 1 0	12,987 3 10
e Protection from fire			2,044 0 8	3,022 0 11	353 8 0		1,006 14 8		7,626 8 3	809 10 8			809 10 8	8,436 2 6
f Other works				1,314 13 0	231 6 0		120 0 0		1,666 5 0	908 13 0			908 13 0	2,575 2 0

IX.—Miscellaneous—													
a Refunds	.....	9 11 0	843 8 9	16 13 5	25 0 0	28 0 0	35 0 0	....	928 1 2	25 8 0	. .....	.... .	25 8 0	968 9 2
b Law charges	....	.....	.....	.....	2 8 0	.....	...	.....	2 8 0	...	.....	.....	...	2 8 0
c Other charges	....	709 4 5	94 4 0	21 4 0	2 9 0	.....	6 0 0	40 3 0	873 8 5	845 13 0	. .	200 8 0	1,040 5 0	1,919 13 5
Total A.—Conservancy and Works	.....	47,807 12 2	24,547 14 3	1,04,413 4 4	79,995 3 0	14,193 15 7	72,455 10 5	5,500 1 5	3,48,913 13 5	1,27,223 4 11	20,076 7 1	8,070 5 2	1,51,869 1 2	5,00,782 14 7
B.—ESTABLISHMENT.														
I.—Salaries—														
a Conservators	12,000 0 0	..	...	...	...	...	...	...	12,000 0 0	16,800 0 0	.....	.....	16,800 0 0	28,800 0 0
b Superior officers	...	10,006 12 4	5,988 11 0	11,282 5 11	5,733 5 3	3,850 0 0	7,790 10 6	3,916 10 6	48,668 7 6	22,841 9 0	2,930 0 0	...	25,791 9 0	74,460 0 6
c Subordinate forest and depot establishments	...	4,389 8 6	2,222 2 0	7,584 2 0	5,100 4 9	1,534 0 0	4,910 15 11	2,930 3 0	28,671 4 2	5,140 7 0	2,709 0 0	.....	7,930 7 0	36,310 11 2
d Office establishment	14,571 0 0	1,200 13 5	1,880 8 0	3,546 15 9	2,061 14 0	1,079 3 6	1,524 0 0	983 2 0	26,147 8 8	7,811 1 0	4,015 0 0	.....	12,426 1 0	38,573 9 8
e Deputation and special allowance	400 0 0	.	.....	.....	.....	.....	..	..	400 0 0	. .	.....	.....	...	400 0 0
II.—Travelling Allowances—														
a Conservators	4,243 8 0	...	...	...	.....	.....	.....	...	4,243 8 0	1,518 0 0	.....	.....	1,518 0 0	5,761 8 0
b Superior officers		4,134 5 2	2,445 0 0	3,306 0 0	1,680 0 0	2,207 0 0	2,072 1 10	1,648 0 0	17,051 7 0	4,477 2 0	.. ..	....	4,477 2 0	22,128 9 0
c Subordinate forest and depot establiaments	...	116 12 3	1 14 0			2 0 0	18 12 0	..	139 6 3	140 8 0	.. ..	.. ..	140 8 0	279 14 3
d Office establishment	49 10 8	...	225 15 4	380 12 0	20 11 6	59 15 2	70 7 10	... ..	807 8 1	121 11 0	.. ..	.	121 11 0	929 3 1
III.—Contingencies—														
a Stationery	320 0 0	62 15 0		1 0 0	.....	. ....	8 0 0	3 0 0	391 15 0	1 1 0	...	...	1 1 0	396 0 0
b Carriage of tents and records	.....	18 4 0	21 1 0	1 0 0	.....	... ..	86 4 0	128 8 0	255 1 0	.. ..	..	5 10 0	.....	255 1 0
c Rents, rates, and taxes	. ....	570 3 6	490 0 0	.....	.....	.. ...	...	6 0 0	1,066 3 6	871 10 1	.. ..		877 4 1	1,933 7 7
d Pay of Police Guards	.....	.....	.....	...	.....	... ..	.....	.....	.....	.....	.....	.....	.....	.....
e Official postage	319 0 0	40 13 0	98 9 6	36 11 6	53 11 0	30 2 6	31 12 6	21 6 0	582 1 0	84 13 0	.....	.....	84 13 0	646 14 0
f Sundries	1,844 0 0	1,839 10 0	268 5 0	136 10 0	368 14 3	62 6 0	242 4 0	128 2 0	4,941 3 3	1,850 5 3	113 13 0	147 12 3	2,111 15 6	7,053 2 9
Total, B.—Establishment	33,747 2 3	22,404 0 2	13,552 1 10	26,367 9 2	15,042 12 9	8,904 11 2	16,755 4 7	8,704 15 6	1,45,628 9 5	61,368 3 4	10,477 13 0	153 7 3	71,980 7 7	2,17,618 1 0
Grand Total of Expenditure	33,747 2 3	70,271 12 4	38,100 0 1	1,30,780 13 6	95,038 0 0	23,098 10 9	89,210 15 0	14,205 0 11	4,94,542 6 10	1,88,592 3 3	31,154 4 1	4,123 12 5	2,23,849 3 9	7,18,400 15 7

FORM No. 50.—[PRESCRIBED] *Account-current of the Forest Department, British Burma, for the official year 1878-79.*

	Tenasserim.	Pegu.	British Burma.		Tenasserim.	Pegu.	British Burma.
	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.
To Cash balance on 1st April 1878 ...	2,927 10 2	2,005 15 0	4,933 9 2	By expenditure under A	1,51,869 1 2	3,48,913 13 5	5,00,782 14 7
				Ditto ditto B	71,089 7 7	1,45,628 9 5	2,17,618 1 0
To Revenue receipts	4,82,044 13 2	6,55,517 6 9	11,37,562 3 11	By revenue remittances to State Treasuries	4,50,433 4 11	5,95,304 9 0	10,54,797 13 11
„ Remittances from State Treasuries	2,26,572 4 2	4,57,835 1 5	6,84,407 5 7	„ Remittances other Departments	.....	25,621 12 7	25,621 12 7
„ Ditto adjusted by Book Transfer	506 9 1	29,284 14 8	29,791 7 9	„ ditto adjusted by Book Transfer	22,591 10 8	38,923 2 8	61,514 13 4
„ Remittances other Departments	234 9 0	2,784 10 9	3,020 3 9	„ Lapsed deposits	.....	300 0 0	300 0 0
„ Unclaimed Deposits	.....	2,766 10 9	2,766 10 9	„ Deposits repaid	15 0 0	17,834 11 3	17,849 11 3
Contribution to Funds—				„ Rewards for proficiency in Oriental languages	500 0 0	250 0 0	750 0 0
Uncovenanted Service Family Pension Fund	462 11 0	1,215 0 0	1,677 11 0	„ Suspense account	.....	279 0 0	279 0 0
Madras Military Fund	747 13 0	.....	747 13 0	„ Provincial services	.....	4,723 8 1	4,723 8 1
Military Department, Bengal	60 0 0	.....	60 0 0	„ Advances recoverable	25,971 0 0	2,57,174 10 4	2,83,145 10 4
To Deposits	15 0 0	33 0 10	48 0 10				
„ Suspense account	.....	314 0 0	314 0 0	*Balance on 31st March 1879.* ...	889 5 1	5,060 13 5	5,950 2 6
„ Advances recoverable	20,387 7 10	2,77,707 14 0	2,97,995 5 10				
Total ...	7,33,258 13 5	14,40,074 10 2	21,73,333 7 7	Total ...	7,33,258 13 5	14,40,074 10 2	21,73,333 7 7

FORM No. 51.—[PRESCRIBED.] *Statement of Outstandings and Liabilities on account of Contractors and Disbursers for 1878-79.*

DIVISION.		DEPARTMENT DEBTOR.			DEPARTMENT CREDITOR.			BALANCE DUE		REMARKS.
		At commencement of year.	Recoveries in cash, and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during the year.	At close of year.	To Department (Outstandings).	By Department (Liabilities).	
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
SALWEEN	Contaractors	.....	38,198 7 10	38,198 7 10	2,926 3 10	39,672 4 0	42,598 7 10	4,400 0 0	.....	
	Disbursers	.....	1,623 2 0	1,623 2 0	249 14 0	5,221 0 0	5,470 14 0	3,847 12 0	.....	
	Total	.....	39,821 9 10	39,821 9 10	3,176 1 10	44,893 4 0	48,069 5 10	8,247 12 0	.....	
SOUTH TENASSERIM.	Contractors	.....	338 0 0	338 0 0	238 0 0	700 0 0	938 0 0	600 0 0	.....	
	Disbursers	.....	.....	.....	111 3 0	.....	111 3 0	111 3 0	.....	
	Total	.....	338 0 0	338 0 0	349 3 0	700 0 0	1,049 3 0	711 3 0	.....	
	Total, Tenasserim	.....	40,159 9 10	40,159 9 10	3,525 4 10	45,593 4 0	49,118 8 10	8,958 15 0	.....	
GOVERNMENT TIMBER DEPÔT AND AGENCY OFFICE.	Contractors	213 0 0	46,447 0 3	46,660 0 3	19,356 11 4	30,789 2 5	50,145 13 9	3,485 13 6	.....	
	Disbursers									
RANGOON	Contractors	. .	25,251 8 10	25,281 8 10	3,374 2 3	29,389 5 10	32,763 8 1	7,481 15 3	.....	
	Disbursers									
THARRAWADDY	Contractors	138 0 0	1,22,166 9 9	1,22,304 9 9	43,775 13 1	1,07,022 10 0	1,50,798 7 1	28,531 13 4	38 0 0	
	Disbursers									
	Carried over	351 0 0	1,93,895 2 10	1,94,246 2 10	66,506 10 8	1,67,201 2 3	2,33,707 12 11	39,499 10 1	38 0 0	

Form No. 51—concluded.

Division.	Department Debtor.			Department Creditor.			Balance due		Remarks.
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during the year.	At close of year.	To Department (Outstandings.)	By Department (Liabilities.)	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Brought forward ...	351 0 0	1,93,895 2 10	1,94,246 2 10	66,506 10 8	1,67,201 2 3	2,33,707 12 11	32,499 10 1	38 0 0	
Prome ... Contractors	0 8 1	67,708 11 7	67,709 3 8	42,860 10 0	35,411 8 1	78,272 2 1	10,562 14 5	.....	
Prome ... Disbursers									
Western ... Contractors	.....	5,747 2 0	5,747 2 0	5,426 2 0	5,985 0 0	11,411 2 0	5,664 0 0	.....	
Western ... Disbursers									
Sittang ... Contractors	18 0 0	46,983 5 4	47,001 5 4	14,947 0 0	45,368 12 0	60,315 12 0	13,314 6 9	.....	
Sittang ... Disbursers									
Shwe-gyeen ... Contractors	.....	3,900 4 9	3,900 4 9	2,249 4 9	3,208 4 0	5,457 8 9	1,557 4 0	.....	
Shwe-gyeen ... Disbursers									
Mergui ... Contractors	. ....	2 5 0	2 5 0	2 5 0	. ...	2 5 0	.....	.....	
Mergui ... Disbursers									
Total ...	369 8 1	(a)3,18,236 15 6	3,18,606 7 7	1,31,992 0 5	2,57,174 10 4	3,89,166 10 9	(b) 70,598 3 2	38 0 0	
Grand Total ...	369 8 1	3,68,396 9 4	3,68,766 1 5	1,35,517 5 3	3,02,767 14 4	4,38,285 3 7	79,557 2 2	38 0 0	

	Rs. A. P.
(a) Total credited in Form No. 50, under A.R.	2,77,707 14 0
Deduct recoveries credited, belonging to Tenasserim ...	249 14 0
Total ...	2,77,458 0 0
Add recoveries in adjustment of advances charged to Budget heads previous to 1st April 1877	10,037 0 0
Outstandings shewn in ledger on 1st April 1877, but which had never been charged in any cash account erroneously credited under A.R., in account for 1877-78, and written back in 1878-79	15,424 2 2
Dttto ditto erroneously credited under A. R. in account 1878-79, and written back	15,317 13 4
Total ...	3,18,236 15 6

(b) Includes the following amount which was charged to budget heads before 1st April 1877.

Tharrawaddy division ...	2,845 15 0
Prome do.	134 8 0
Total ...	2,980 7 0

FORM No. 52.— [PRESCRIBED] *Statement of Outstandings on account of Revenue for the year 1878-79.*

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total	Amount realized during year.	Balance due to the department at the end of year.	Remarks.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
SALWEEN	Squares, scantlings, crooks, padouk, &c.	1,11,999 12 5	89,075 0 6	2,01,074 12 11	1,08,390 5 10	92,684 7 1	
KADOE	Drift teak timber	...	3,121 4 0	3,121 4 0	3,121 4 0	...	
SOUTH TENASSERIM ...	Boards, scantlings, sleepers, thingan logs	...	386 9 11	386 9 11	386 9 11	...	
	Total ...	1,11,999 12 5	92,582 14 5	2,04,582 10 10	1,11,898 3 9	92,684 7 1	
THARRAWADDY	I. Sale of timber	.....	4,328 7 9	4,328 7 9	4,328 7 9	.....	
	II. Do. do. removed from the forests, &c.	.....	9,590 11 2	9,590 11 2	9,590 11 2	.....	
	b. Firewood and Charcoal	.....	347 10 6	347 10 6	347 10 6	.....	
	c. Bamboo	.....	403 1 0	403 1 0	403 1 0	.....	
	e. Other minor produce	.....	871 12 3	871 12 3	871 12 3	.....	
	III. Confiscated, drift and waif-wood	.....	784 15 9	784 15 9	784 15 9	.....	
	V. b. Refunds	.....	620 3 9	620 3 9	620 3 9	.....	
	c. Other sources	.....	34,421 5 11	34,421 5 11	34,421 5 11	.....	
	Total ...	.....	51,368 4 1	51,368 4 1	51,368 4 1	.....	
RANGOON	II. Sale of timber removed from the forests, &c.	.....	30,680 2 11	30,680 2 11	30,680 2 11	....	
	b. Firewood and Charcoal	.....	164 0 0	164 0 0	164 0 0	.....	
	c. Other minor produce	.....	1,612 13 0	1,612 13 0	1,612 13 0	.....	
	III. Confiscated drift and waif-wood	.....	231 5 0	231 5 0	231 5 0	.....	
	V. b. Refunds...	.....	93 1 4	93 1 4	93 1 4	.....	
	Total ...	.....	32,781 6 3	32,781 6 3	32,781 6 3	.....	
PROME	I. Sale of timber	.....	10,184 8 3	10,184 8 3	10,184 8 3	.....	
	II. Do. do. removed from the forests, &c. ...	.....	7,413 3 0	7,413 3 0	7,413 3 0	.....	
	b. Firewood and Charcoal	.....	65 9 6	65 9 6	65 9 6	.....	
	e. Other minor produce	.....	10,924 0 0	10,924 0 0	10,924 0 0	.....	
	III. Confiscated, drift and waif-wood	.....	165 6 3	156 6 3	40 0 0	.....	
	V. a. Fines and forfeitures	.....	40 0 0	40 0 0	40 0 0	.....	
	c. Other sources	.....	40 8 8	40 8 8	40 8 8	.....	
	Total ...	...	28,824 3 8	28,824 3 8	28,824 3 8	.....	
SITTANG	I. Sale of timber	983 0 0	2,707 6 0	3,690 6 0	3,690 6 0	.....	
	II. Do. do. removed from the forests, &c. ...	... .	4,307 4 11	4,307 4 11	4,307 4 11	.....	
	b. Firewood and Charcoal	.....	48 0 0	48 0 0	48 0 0	.....	
	e. Other minor produce	.....	1,328 0 0	1,328 0 0	1,328 0 0	.....	
	III. Confiscated, drift and waif-wood	.....	30,579 4 0	30,579 4 0	30,579 4 0	.....	
	V. a. Fines and forfeitures	.....	430 0 0	430 0 0	430 0 0	.....	
	b. Refunds	.. ..	26 7 0	26 7 0	26 7 0	.....	
	c. Other sources	...	6 1 0	6 1 0	6 1 0	.....	
	Total ...	983 0 0	39,432 6 11	40,415 6 11	40,415 6 11	.....	
	Carried over ...	983 0 0	1,52,406 4 11	1,53,389 4 11	1,53,389 4 11	.....	

Form No. 52—concluded.

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total.	Amount realized during year.	Balance due to the department at the end of year.	Remarks.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
	Brought forward ...	983 0 0	1,53,406 4 11	1,53,389 4 11	1,53,389 4 11	.....	
Shwe-gyeen	I. Sale of timber	.....	347 8 0	347 8 0	347 8 0	.....	
	II. Do. do. removed from the forests, &c.	.....	2,627 3 4	2,627 3 4	2,627 3 4	.....	
	b. Firewood and Charcoal	.....	577 0 0	577 0 0	577 0 0	.....	
	c. Other minor produce	.....	838 0 0	838 0 0	838 0 0	.....	
	III. Confiscated, drift and waif-wood	.....	484 4 0	484 4 0	484 4 0	.....	
	V. *a.* Fines and forfeitures	.....	30 0 0	30 0 0	30 0 0	.....	
	b. Refunds	.....	6 7 0	6 7 0	6 7 0	.....	
	c. Other sources	.....	145 6 6	145 6 6	145 6 6	.....	
	Total ...	.....	5,055 12 10	5,055 12 10	5,055 12 10	.....	
Western	I. Sale of timber	197 0 0	6,230 8 0	6,427 8 0	6,394 8 0	33 0 0	
	II. Do. do. removed from the forests, &c.	.....	8,056 14 2	8,056 14 2	8,056 14 2	.....	
	b. Firewood and Charcoal	.....	483 7 0	483 7 0	483 7 0	.....	
	c. Other minor produce	.....	1,439 4 0	1,439 4 0	1,439 4 0	.....	
	III. Confiscated, drift and waif-wood	.....	6,181 11 0	6,181 11 0	6,181 11 0	.....	
	V. *b.* Refunds	.....	20 0 0	20 0 0	20 0 0	.....	
	c. Other sources	.....	12 0 1	12 0 1	12 0 1	.....	
	Total ...	197 0 0	22,423 12 3	22,620 12 3	22,587 12 3	33 0 0	
Agency Office	I. Sale of timber	23,016 8 6	4,70,711 2 9	4,93,727 11 3	4,84,643 11 3	9,084 0 0	
	a. Bamboos	.....	75 4 0	75 4 0	75 4 0	.....	
	II. Sale of timber removed from the forests, &c. ...	.....	329 9 9	329 9 9	329 9 9	.....	
	III. Confiscated, drift and waif-wood	.....	10,990 2 0	10,990 2 0	10,990 2 0	.....	
	V. *b.* Refunds	.....	72 0 7	72 0 7	72 0 7	.....	
	c. Other sources	.....	2,570 5 8	2,570 5 8	2,570 5 8	.....	
	Total ...	23,016 8 6	4,84,748 8 9	5,07,765 1 3	4,96,681 1 3	9,084 0 0	
	Total, Pegu Circle ...	24,196 8 6	6,64,634 6 9	6,88,830 15 3	6,79,713 15 3	9,117 0 0	
	Grand Total ...	1,36,196 4 11	7,57,217 5 2	8,93,413 10 1	7,91,612 3 0	1,01,801 7 1	

Form No. 54.—*Statement of Logs, Sleepers, and other Scantlings cut and exported during the year 1878-79.*

Division.	Forest Range.	Locality.	Description of timber and scantlings.	On hand from previous year.		Cut during current year.		Total.		Disposed of during current year.			Closing balance.		Remarks.
				No.	C. ft.	No.	C. ft.	No.	C. ft.	How disposed of.	No.	C. ft.	No.	C. ft.	
Salween.			Square	3,551	118,054	221	11,266	3,772	129,320	Private sale and Gun Carriage Factory Bombay. ...	3,742	128,570	30	750	
			Scantling	...	45,761	...	5,786	...	51,547	Private and Consulting Architect Madras	..	51,203	...	344	
			Shingles	269,325	4,474	56,650	944	325,975	5,418	Do. and for Government purposes.	325,975	5,418	...	..	
			Hard-wood sleepers, long.	.	...	5,279	18,329	5,279	18,329	..	..	.	5,279	18,329	
			Do. do., short	.	...	246	284	246	284	...	...	..	246	284	
			Total .	...	168,289	...	36,609	.	204,898	..	...	185,191	...	19,707	
South Tenasserim.			Thingan logs	...	...	46	1,793	46	1,793	Sold by public and private sale.	46	1,793	...	..	
			Logs of other woods ...	...	...	8	91	8	91	..		.	8	91	
			Scantling	...	...	391	500	391	500	Sold by auction . ..	391	500	..	..	
			Sleepers	...	...	1,060	3,524	1,060	3,524	Shipped to Calcutta	839 *a*	2,911	...	...	*a* Includes 100 of last year.
				...	...	...	.	...	...	Used for Government purposes.	10	27	211	586	
			Total ..	...		...	5,908	...	5,908	..	...	5,231	...	677	
			Total Tenasserim ...	..	168,289	..	42,517	...	210,806	...	...	190,422	...	20,384	
Tharrawaddy.	Shoaylay ..	...	..	9	...	1,715	...	1,724	...		..	...	...	...	
	Boben	Toungnyo ...	....	1,120	..	1,147	...	2,267	...		...	...	..	...	
		Mimboo ...	.....	383	...	1,060	...	1,443	...	Sent to Rangoon 6,165 ...	...	...	...	...	
		Boben ...	.....	1,216	...	2,608	...	3,824	...	Expended by Department 36 ...	...	...	...	...	
	Gamoung ...	Toung Gamoung Ngapeung ...	....	1,410	...	1,050	...	2,460	...	Sold to Public Dept. 33 ...	...	...	...	...	
										Do. to Private parties 30 ...	...	..	...	...	
										Teak squares 147 ...	..	..	...	...	
		Minghla ...	.....	432	...	683	...	1,115	...		6,411	301,317	9,523	4,42,249	
	Beeling	Mokkha ...	.....	253	...	226	...	479	...						

Form No. 54—continued.

Division.	Forest Range.	Locality.	Description of timber and scantings.	On hand from previous year.		Cut during current year.		Total.		Disposed of during current year.			Closing balance.		Remarks.
				No.	C. ft.	No.	C. ft.	No.	C. ft.	How disposed of.	No.	C. ft.	No	C. ft.	
Thabrawaddy—concld.	Beeling—concld.	Beeling ...	.....	995	...	1,148	...	2,143	...	.....	...	...	...	...	
		Thongzai ...	.....	279	...	...	...	279	..	.....	...	...	...	...	
	Boben ...	Boben ...	.....	24	...	62	...	86	...	.....	...	...	...	...	
	Gamoung ...	Gamoung ...	.....	...	...	103	...	103	...	.....	...	...	...	...	
		Other sources.	.....	...	..	11	...	11	..	.....	...	...	...	...	
			Total	6,121	2,82,355	9,813	461,211	15,934	743,566	.....	6,411	301,317	9,523	442,249	
		Irrawaddy Drift ...	Logs embedded in mud	94	4,042	...	...	94	4,042	Disposed of by sale...	94	4,042	...	...	
			Refuse teak	...	...	657	10,626	657	10,626	Made over	657	10,626	...	...	
			Woods of other kind ...	...	...	238	8,330	238	8,330	Disposed of by sale...	238	8,330	...	...	Pyinkadoe 90. Sha 132. Thayaybon 15, and Thitkadoe 1.
			Total ...	6,215	286,397	10,708	480,167	16,923	766,564	.....	7,400	324,315	9,523	442,249	
Rangoon.	Pegu ...	Pegu ...	Teak logs	...	...	301	14,461	301	14,461	Sent to Rangoon ... .. 281 Expended by Department 20	301	14,461	...	...	
			Total ...	...	...	301	14,461	301	14,461	.....	301	14,461	...	...	
		Drift ...	Teak logs	...	...	125	5,636	125	5,636	Sold 9, sent to Rangoon 116 logs.	125	5,636	...	...	
			Total	...	...	426	20,097	426	20,097	...	426	20,097	..	...	
Sittoung.		Kawleya ...	Teak logs	...	...	276	...	...	..						
		Padah ...	Do.	...	...	217	...	...	...						
		Mong ...	Do.	...	..	63	...	...	..						
			Total ...	34	1,564	556	25,030	590	26,584	Made over to Contractors on half profit principle... 429 Sent to Rangoon 514	943	47,764	...	...	
			Other kinds—												
		Kadah ...	Kanyin	...	...	184	...	...	...						
		Moong ...	Thitka 19, Kanyin and Pyemma 46	...	...	65	...	..	...						
		Kyunpagoo ...	Thitka	...	...	44	...	...	...						
		Madama ...	Do.	...	...	60	...	...	...						
			Total	...	...	353	21,180	353	21,180						
		Drift ...	.....	312	13,333	325	13,650	637	26,983	Returned to claimants ... 148 Used by Department ... 20 Sold ... ... 45 Broken adrift 235	448	18,816	189	8,167	
				...	...	...	...	...	...						
				...	...	...	...	...	...						
			Total ...	346	14,697	1,234	59,850	1,580	74,747	.....	1,391	66,580	189	8,167	

FORM No. 54.—*Statement of Logs, Sleepers and other Scantlings cut and exported during the year 1878-79.*—continued.

Division.	Forest Range.	Locality.	Description of timber and scantlings.	On hand from previous years.		Cut during current year.		Total.		Disposed of during current year.			Closing balance.	
				No.	C. ft.	No.	C. ft.	No.	C. ft.	How disposed of.	No.	C. ft.	No.	C. ft.
Prome.	Thallaydan	Thallaydan Choung	Teak logs	...	...	55	...	...	...	Sent to Rangoon ... ... 880 Neaped timber, written back ... ... 1,284 Sold ... ... 275 Lost 1	2,420	112,342	105	6,634
	Mahathaman	Mahathaman	do. scantling	...	...	79	...	...	...					
	Nawing	Nawing Choung	Teak logs	...	...	494	...	...	...					
	Boolay	Boolay do.	Ditto	...	...	71	...	...	...					
	Mudday	Mudday do.	Ditto	...	...	75	...	...	...					
	Mindoon	Mindoon do.	Ditto	...	...	268	..	...	...					
		Hpatashine	Ditto	...	...	102	...	...	...					
			Total	1,401	63,682	1,144	55,294	2,545	118,976		2,440	112,342	105	6,634
		Mindoon	Engyin and Theya	97	4,365	24	406	121	4,771	Sent to Rangoon ... ... 15 Sold ... ... 116 Lost 16	147	3,765	65	2,251
			Teak worked out by purchasers	...	...	91	1,245	91	1,245	Returned to claimants 65				
			Drift timber	23	969	122	5,246	145	6,235	Sold 42	107	4,601	38	1,634
			Total	1,521	69,036	1,381	62,191	2,902	1,31,227		2,694	120,708	206	10,519
Western.		Upper and Lower Bassein forests	Teak logs	2	92	...	...	2	92	Sold	2	92	...	...
			Woods of other kinds	587	15,690	568	19,880	1,155	35,570	Sold	543	18,905	612	16,065
		Irrawaddy and Bassein	Drift, confiscated and waif	...	...	722	31,046	722	31,046	Sold ... ... 159 Used ... ... 1 Claimed ... ... 208 Lost 4	372	15,996	350	15,050
			Total	589	15,782	1,290	50,926	1,879	66,708		917	34,993	962	31,715
Sittang.		Yeanee	Teak logs	...	...	109	...	109	...	Sent to Rangoon ... . 4,345 Sold at Toungoo 289	4,634	221,856	...	...
		Myohla	Ditto	...	...	446	...	446	...					
		Swah	Ditto	...	...	32	...	32	...					
		Thine	Ditto	...	...	644	...	644	...					
		Khaboung	Ditto	...	...	1,198	...	1,198	...					
		Hpyoo	Ditto	...	...	756	...	756	...					
		Bonkogwah	Ditto	...	...	7	...	7	...					
		Thoukyaghat	Ditto	...	...	250	...	250	...					
		Koomoung	Ditto	...	...	87	...	87	...					
		Koon	Ditto	...	...	1,060	...	1,060	...					
		Kannee	Ditto	...	...	1	...	1	...					
		Gwaithai	Ditto	...	...	16	...	16	...					
		Other sources	Ditto	...	...	28	...	28	...					
			Total	...	...	4,634	221,856	4,634	221,856		4,634	221,856	.....	.....

Form No. 54—continued.

Division	Forest Range.	Locality.	Description of timber and scantings.	On hand from previous year.		Cut during current year.		Total.		Disposed of during current year.			Closing balance.		Remarks.
				No.	C. ft.	No.	C. ft.	No.	C. ft.	How disposed of.	No.	C. ft.	No	C. ft.	
Thayawaddy—concld.	*Beeling—contd.*	Beeling ...	.....	995	...	1,148	...	2,143	...	.....	...	...	...	...	
		Thongzai ...	.....	279	...	...	...	279	..	.....	...	...	...	...	
	Boben ...	Boben ...	.....	24	..	62	...	86	...	.....	...	...	...	...	
	Gamoung ...	Gamoung ...	.....	..	...	103	...	103	...	.....	...	...	...	...	
		Other sources.	.....	.	.	11	...	11	.	.....	...	...	...	...	
			Total	6,121	2,62,355	9,813	461,211	15,934	743,566	.....	6,411	301,317	9,523	442,249	
		Irrawaddy Drift ...	Logs embedded in mud.	94	4,042	...	...	94	4,042	Disposed of by sale...	94	4,042	...	...	
			Refuse teak...	...	...	657	10,626	657	10,626	Made over	657	10,626	...	...	
			Woods of other kind ...	...	...	238	8,330	238	8,330	Disposed of by sale	238	8,330	...	...	Pyinkadoe 90, Sha 132. Thayayben 15, and Thitkadoe 1.
			Total ...	6,215	286,397	10,708	460,167	16,923	766,564	.....	7,400	324,315	9,523	442,249	
Rangoon.	Pegu ...	Pegu ...	Teak logs	...	...	301	14,461	301	14,461	Sent to Rangoon ... ... 281 Expended by Department 20	301	14,461	...	...	
			Total ...	...	...	301	14,461	301	14,461	.....	301	14,461	...	...	
		Drift ...	Teak logs	...	...	125	5,636	125	5,636	Sold 9, sent to Rangoon 116 logs.	125	5,636	...	...	
			Total	...	...	426	20,097	426	20,097	....	426	20,097	...	...	
		Kawleya ...	Teak logs	...	...	276	...	...	...						
		Padah ...	Do.	...	...	217	...	...	...						
		Mong ...	Do.	...	...	63	...	...	..						
			Total ...	34	1,564	556	25,020	590	26,584						
			Other kinds—							Made over to Contractors on half profit principle... 429					
		Kadah ...	Kanyin	...	...	184	..	...	...	Sent to Rangoon 514	943	47,764	...	...	
		Moong ..	Thitka 19, Kanyin and Pyemma 46	...	...	65	...	...	...						
		Kyunpagoo ...	Thitka	...	...	44	...	...	...						
		Madama ...	Do.	...	...	60	...	...	...						
			Total	..	...	353	21,180	353	21,180						
Sagyin.		Drift ...	.....	312	13,333	325	13,650	637	26,983	Returned to claimants .. 148 Used by Department ... 20 Sold ... ... 45 Broken adrift 235	448	18,816	189	8,167	
			Total ...	346	14,697	1,234	59,850	1,580	74,747	.....	1,391	66,580	189	8,167	

FORM No. 54.—*Statement of Logs, Sleepers and other Scantlings cut and exported during the year 1878-79.*—continued.

Division.	Forest Range.	Locality.	Description of timber and scantlings.	On hand from previous years.		Cut during current year.		Total.		Disposed of during current year.			Closing balance.	
				No.	C. ft.	No.	C. ft.	No.	C. ft.	How disposed of.	No.	C. ft.	No.	C. ft.
Prome.	Thallaydan	Thallaydan Choung	Teak logs	...	...	55	...	...	...	Sent to Rangoon ... ... 880 Neaped timber, written back ... ... 1,284 Sold ... ... 275 Lost 1	2,420	112,342	105	6,634
	Mahathaman	Mahathaman	do. scantling	...	...	79	...	...	...					
	Nawing	Nawing Choung	Teak logs	...	...	494	...	...	...					
	Boolay	Boolay do.	Ditto	...	...	71	..	...	...					
	Mudday	Mudday do.	Ditto	...	...	75	...	...	...					
	Mindoon	Mindoon do.	Ditto	..	...	268	..	...	...					
		Hpatashine	Ditto	...	...	102	...	...	...					
			Total	1,401	63,682	1,144	55,294	2,545	118,976		2,440	112,342	105	6,634
		Mindoon	Engyin and Theya	97	4,365	24	406	121	4,771	Sent to Rangoon ... ... 15 Sold ... ... 116 Lost 16	147	3,765	65	2,251
			Teak worked out by purchasers	...	...	91	1,245	91	1,245	Returned to claimants 65				
			Drift timber	23	969	122	5,246	145	6,235	Sold 42	107	4,601	38	1,634
			Total	1,521	69,036	1,381	62,191	2,902	1,31,227		2,694	120,708	208	10,519
Western.		Upper and Lower Bassein forests and Irrawaddy and Bassein	Teak logs	2	92	...	..	2	92	Sold	2	92	...	...
			Woods of other kinds	587	15,690	568	19,880	1,155	35,570	Sold ... ... 159 Used 1	543	18,905	612	16,655
			Drift, confiscated and waif	...	...	722	31,046	722	31,046	Claimed ... ... 206 Lost 4	372	15,996	350	15,050
			Total	589	15,782	1,290	50,926	1,879	66,708		917	34,903	962	31,715
Sittang.		Yeanee	Teak logs	...	...	109	...	109	...					
		Myohla	Ditto	...	...	446	...	446	...					
		Swah	Ditto	...	...	32	...	32	...					
		Thine	Ditto	...	...	644	...	644	...					
		Khaboung	Ditto	...	...	1,198	...	1,198	...					
		Hpyoo	Ditto	...	...	756	...	756	...	Sent to Rangoon ... . 4,345 Sold at Toungoo 289	4,634	221,856	...	...
		Bonkogwah	Ditto	...	...	7	...	7	...					
		Thoukyaghat	Ditto	...	...	250	...	250	...					
		Kodnoung	Ditto	...	...	87	...	87	...					
		Koon	Ditto	...	...	1,060	...	1,060	...					
		Kannee	Ditto	...	...	1	...	1	...					
		Gwaithai	Ditto	...	...	16	...	16	...					
		Other sources	Ditto	...	...	28	...	28	...					
			Total	...	...	4,634	221,856	4,634	221,856		4,634	221,856	.....	.....

Form No. 54—concluded.

Division.	Forest Range.	Locality	Description of timber and scantling.	On hand from previous year.		Cut during current year.		Total.		Disposed during the current year.			Closing balance.	
				No.	C. ft.	No.	C. ft	No.	C. ft.	How disposed of.	No.	C ft.	No.	C ft
Sittang—continued.		Thine	Other kinds ..		.	36	..	36	..				.	..
		Thoukyaghat	Ditto ...	..	...	232	..	232	...					
		Koonoung ...	Ditto .		..	10	.	10						
		Koon ..	Ditto .	...		140	.	140	..	Sent to Rangoon .. 549				
		Samoh	Ditto ..	..	.	106	..	106	...	Sold at Toungoo . 1	550	23,100	.	...
		Other sources ...	Ditto ..	..	...	22	..	22						
		Bonkogwah ...	Ditto ..	.	.	4		4	.					
				.	...	550	23,100	550	23,100		550	23,100	..	.
		Sittang ..	River drift ...	..		9,535	400,470	9,535	400,470	Sold . . . 9 Delivered at Shwe-gyeen for disposal .. 222 Sent to Rangoon ... . 103 Returned to claimants ... 8,266 Gone adrift . .. 934	9,534	400,430	1	40
				.		9,535	400,470	9,535	4,00,470		9,534	400,430	1	40
			Total ...	..		14,719	645,426	14,719	645,426		14,718	6,45,386	1	40
Agency.			Drift, confiscated and waif ...	.	.	397	17,468	397	17,468	Sent to Government Timber Depot, Rangoon	397	17,468	...	
			Total ..	.	.	397	17,468	397	17,468		397	17,468	...	
			Total, Pegu Circle ...	8,671	386,112	30,155	1,336,125	38,826	1,722,237		27,943	1,229,547	10,883	492,690
			Grand Total ..	.....	554,401	. ...	1,378,642		1,933,043			1,419,969		513,074

FORM No. 55.—[PRESCRIBED] *Statement of Timber and other Produce brought to the Moulmein and Rangoon Depôts from the different Forest Divisions, 1878-79.*

Division	Forest	Description of timber, &c	Number of Pieces	Number of C ft	Total of each Division Pieces.	Total of each Division C ft
Salween	Beeling	Doogies	448	20,160		
		Loozars	209	8,360		
		Yatthits	84	2,184		
					741	30,704
	Yoonzaleen	Pieces	249	6,474		
					249	6,474
	III Division	Doogies	200	9,550		
		Loozars	42	1,680		
		Pieces	18	390		
		Yatthits	17	442		
					277	12,062
	Thoungeen	Doogies	3,621	2,10 954		
		Loozars	601	24 040		
		Pieces	782	17,515		
		Yatthits	25	650		
		Crooks	6	126		
					5,035	262,285
	Lower Thoungyeen	Doogies	2	100		
		Loozars	6	240		
					8	340
	Houndraw	Crooks	140	2,012		
					140	2,912
	Koloon	Pieces	208	3,216		
					208	3,216
	Moeboung	Pieces	520	4,680		
					520	4,680
	Mattigate Kyouktaga	Pieces	527	10,540		
					527	10,540
	Goodoogway	Crooks	86	1,806		
					86	1,806
	Attaran	Pieces	388	7,700		
		Crooks	89	1,869		
					477	9,629
	Drift timber transferred from Kadoe Revenue station	Doogies	26	1,280		
		Loozars	2	80		
		Crooks	19	390		
					47	1,765
	Attaran	Padouk logs	165	5,762		
		Do branches	150	750		
					315	6,512
	Do	Thitkadoe	162	5,249		
					162	5,249
	Do.	Thityah	8	280		
					8	280
	Do	P'yinkadoe	67	2,010		
					67	2,010
South Tenasserim	Mergui and Tavoy	Hard wood sleepers	6,364	21 524		
					6,364	21,524
	Mrgui	Thingan logs	31	1,452		
					31	1 452
		Total Tenasserim			15,322	383,440
Thabawaddy	Toung Nyo ...	Doogies	462	22,038		
		Loozars	979	43 076		
		Yatthits	135	5 535		
		Yard pieces	6	438		
		Mast do.	1	111		
	Mimboo	Doogies	100	4 900		
		Loozars	323	14,212		
		Yatthits	20	820		
		Yard pieces	32	2,336		
	Minhla	Doogies	81	3,969		
		Loozars	194	5 806		
		Yatthits	34	1,394		
		Yard pieces	1	73		
		Squares	2	122		
	Mokkah	Doogies	88	4,312		
		Loozars	104	4,576		
		Yatthits	7	287		
		Squares	1	61		
	Bobin	Doogies	188	9 212		
		Loozars	784	32,290		
		Yatthits	57	2,337		
		Yard pieces	1	73		
	Shoaylay	Doogies	246	12,054		
		Loozars	170	7 480		
		Yatthits	66	2,706		
	Thongzai	Doogies	88	4 312		
		Loozars	120	5,280		
		Yatthits	37	1,517		
		Carried over	4,217	192,029		

Form No. 55.—[Prescribed] continued.

Division.	Forest.	Description of timber, &c.	Number of Pieces.	Number of C. ft.	Total of each division. Pieces.	Total of each division. C. ft.
		* Brought forward ...	4,217	192,023		
Thabawddy.	Shaboung	Doogies	280	13,720		
		Loozars	105	8,024		
		Yatthits	63	2,583		
		Yard pieces	3	219		
	Gameoung	Doogies	52	2,548		
		Loozars	202	8,888		
		Yatthits	3	123		
		Squares	1	61		
	Myoung choung	Doogies	7	343		
		Loozars	33	1,452		
		Yatthits	23	948		
	Toung choung	Doogies	7	343		
		Loozars	80	1,320		
		Yard piece	1	78		
	Beeling	Doogies	234	11,466		
		Loozars	545	23,980		
		Yatthits	268	10,988		
		Squares	2	122		
					6,167	279,619
Rangoon.	Zamayee	Doogies	112	5,488		
		Loozars	44	1,936		
		Yatthits	66	3,520		
	Pegu	Doogies	18	882		
		Loozars	11	484		
		Yatthits	9	360		
		Yard pieces	1	73		
					261	12,758
Sittang.	Thoukyaghat	Doogies	106	5,194		
		Loozars	70	3,080		
		Yatthits	26	1,066		
		Yard pieces	2	146		
		Thitka and doe	232	10,208		
	Swah	Doogies	5	245		
		Loozars	3	132		
		Thitka	1	44		
	Yannoe	Doogies	91	4,451		
		Loozars	10	440		
		Yatthits	8	328		
	Kannee	Thitka	1	44		
	Gwaythay	Doogie	1	49		
		Loozars	9	396		
	Hphyoo	Doogies	199	9,310		
		Loozars	527	23,188		
		Yatthits	32	1,312		
		Yard pieces	7	511		
	Myohla	Doogies	151	7,399		
		Loozars	84	3,696		
		Yatthits	9	361		
	Khaboung	Doogies	478	23,422		
		Loozars	706	31,064		
		Yatthits	7	287		
		Yard pieces	3	219		
		Thitka and doe	4	176		
	Thine	Doogies	366	17,934		
		Loozars	239	10,516		
		Yatthits	38	1,558		
		Thitka and doe	37	1,628		
	Koon Oung	Doogies	58	2,842		
		Loozars	24	1,056		
		Yatthits	1	41		
		Thitka and doe	14	616		
	Koon	Half Pro. principle ...	1,052	56,808		
		Thitka and doe	140	6,100		
Shwe-gyeen.	Samah	Thitka and doe	106	4,664		
		Laizah	18	700		
	Padah	Doogies	17	833		
		Yatthits	5	205		
		Yard pieces	1	73		
		Thitka and doe	105	4,620		
					4,856	231,291
	Kawbyah	Doogies	24	1,176		
		Loozars	111	4,864		
		Yatthits	3	123		
		Carried over ...	206	11,014	11,304	523,868

Form No. 55.—[Prescribed] continued.

Division.	Forest.	Description of timber, &c.	Number of Pieces.	Number of C. ft.	Total of each Division. Pieces.	Total of each Division. C. ft.
		Brought forward ...	266	11,914	11,804	523,808
Sewe-gyeen—concluded.	Moong	Doogies	5	245		
		Loozars	10	440		
		Yatthits	84	3,444		
		Yard pieces	1	73		
	Madamah	Thitka and doe	60	2,640		
	Koonpakoo	Thitka and doe	22	968		
	Bankoogwah	Thitka	1	44		
	Kadah	Kanyeen	79	5,025		
					528	25,698
Eastern Prome.	Mindoon	Doogies	250	12,250		
		Loozars	50	2,200		
		Yatthits	40	1,640		
		Yard pieces	28	2,044		
		Rejected timber... ...	21	945		
		Mast pieces	1	111		
	Nawing	Doogies	590	29,351		
		Loozars	196	8,624		
		Yatthits	284	11,644		
		Yard pieces	1	73		
		Thityah	15	485		
					1,485	69,317
Western division.	Tarokmaw	Yatthits	15	615		
		Eng	53	848		
	Kyoongalay...	Eng	107	3,152		
	Bassein	Thitka and doe	144	6,336		
	Ditto	Drift timber	3	175		
					412	11,126
Agency Office.	Drift timber	Kanyeen	1	75		
		Doogies	246	12,054		
		Loozars	260	11,440		
		Yatthits	142	5,822		
		Short pieces	25	550		
		Yard pieces	4	292		
		Squares	4	244		
		Thittka and doe	13	572		
		Eng	1	16		
		Pyinmah	1	47		
		Kanyeen	1	75		
		Wood of other kinds ...	2	116		
					700	31,303
		Total, Pegu Circle ...	...	...	14,429	661,907
		Grand total	...	...	20,751	1,044,747

FORM No. 56.—*Account of Timber and other produce for the year 1878-79.*

PARTICULARS.	TENASSERIM.		PEGU.		BRITISH BURMA.	
	Pieces.		*Pieces.*		*Total.*	
	Number.	Cubic feet.	Number.	Cubic feet.	Number.	Cubic feet.
Balance in hand at commencement of year ...	99,692	4,850,977	26,024	949,750	125,706	5,800,727
Number of teak logs brought from the Forests by Contractors and Government Agency ...	8,328	344,648	16,306	681,650	24,634	1,026,298
Woods of other kinds	598	15,844	1,728	72,600	2,326	88,444
Ditto drift, confiscated and waif timber ...	6,618	170,450	11,531	461,250	18,349	631,700
Ditto transferred from Kadoe Drift Timber Register	47	1,765	...	...	47	1,765
Number & worked out by purchasers	...	...	91	1,250	91	1,250
Ditto ditto, by Railway Department teak refuse	...	...	657	10,600	657	10,600
Number of squares obtained by conversion ...	221	11,266	...	...	221	11,266
Scantlings	735	6,990	1,209	4,050	1,944	11,040
Shingles	19	944	...	...	19	944
Hard-wood sleepers	6,364	21,524	...	...	6,364	21,524
Number of logs in transit at close of year and here brought to account	...	...	993	47,150	993	47,150
Kadoe Revenue Station.						
Number of logs registered for duty in 1878-79 ...	127,877	6,010,510	...	...	127,877	6,010,510
Total ...	250,689	11,434,918	58,539	2,228,300	309,228	13,663,218

PARTICULARS.	TENASSERIM.		PEGU.		BRITISH BURMA.	
	Pieces.		*Pieces.*		*Total.*	
	Number.	Cubic foot.	Number.	Cubic foot.	Number.	Cubic foot.
Number of logs and pieces sold during the year ...	8,254	383,430	23,782	778,350	32,036	1,061,780
Squares	3,742	128,570	...	...	3,742	128,570
Scantlings	1,024	51,203	...	...	1,024	51,203
Shingles	108	5,418	...	...	108	5,418
Logs delivered to claimants	1,038	39,444	9,295	345,300	10,333	384,744
Do. used for Government purposes	108	2,517	97	4,150	205	6,667
Do. converted into scantling, &c.	361	20,818	...	...	361	20,818
Timber decayed, logs	20	240	...	...	20	240
Ditto ditto: sleepers	...	...	500	1,050	500	1,050
Ditto in transit, neaped or missing	...	...	535	23,150	535	23,150
Ditto gone adrift during the year	...	...	1,169	38,100	1,169	38,100
Ditto lost	...	...	21	1,000	21	1,000
By transfer	47	1,765	...	...	47	1,765
Sleepers shipped for disposal at Calcutta ...	839*	2,911	...	...	839	2,911
Felled timber written back	...	...	1,284	44,900	1,284	44,900
Made over to Contractors on half profit principle	...	...	429	16,950	429	16,950
Number of logs cleared at Kadoe on payment of duty.	142,696	7,134,500	...	...	142,696	7,134,500
By balance on 31st March 1879	92,452	3,764,102	21,427	975,350	113,879	4,739,452
Total ...	250,689	11,434,918	58,539	2,228,300	309,228	13,663,218

* Includes 100 of previous year.

FORM No. 57.—*Statement shewing the amount realized on account of the different classes of timber and other produce sold during 1878-79.*

DESCRIPTION of TIMBER.		Number of pieces, &c., sold.	Cubic contents.	Amount realized and due on account of sales.	Average amount per log, &c.	Average cubical contents per log.	Average amount per ton.	REMARKS.
	Tenasserim.			Rs. A. P.	Rs. A. P.		Rs. A. P.	
TEAK	Doogies	2,596	145,097	58,746 14 10	22 10 0	55	20 3 0	
	Loozars	808	31,740	18,284 13 10	22 10 0	39	28 12 0	
	Yatthits	123	3,196	2,783 7 4	22 10 0	26	43 8 0	
	Pieces and crooks	1,693	30,307	6,509 12 0	5 0 0	17	14 0 0	
		5,220	210,342	86,325 0 0	16 14 0	40	20 15 0	
	Confiscated, drift and waif	2,217	61,565	231	7 5 0	28	14 13 0	
WOODS OTHER THAN TEAK	Padouk logs	179	6,396	11,873 2 2	66 5 0	35	92 13 0	
	Padouk branches	150	750	150 0 0	1 0 0	5	10 0 0	
	Thitka	20	1,537	498 7 0	24 14 0	77	16 0 0	
	Thitkadoe	31	527	93 0 0	3 0 0	17	8 13 0	
	Thingan	31	1,452	240 0 0	7 13 3	47	8 3 8	
		411	10,662	12,854 9 2	31 4 6	26	60 2 8	
TEAK	Squares and scantlings	4,860	184,389	49,105 13 5	19 6 0	38	25 8 0	
		12,708	466,978	2,11,516 14 7				
	Fees on trade permits	...	...	14,531 3 0				
	Do. minor produce	...	...	60 0 0				
	Miscellaneous	...	...	8,640 10 6				
	Kadoe duty	...	...	2,29,536 8 0				
		...	...	4,64,285 4 1				
	Deduct amount due but not realized during the year	...	...	476 10 8				
		...	...	4,63,808 9 5				
	Add amount realized on account of former year	...	...	18,236 3 9				
	Total, Tenasserim as per form No. 49	...	...	4,82,044 13 2				

Form No. 57—concluded.

Description of Timber.		Number of pieces, &c., sold.	Cubic contents.	Amount realized and due on account of sales.	Average amount per log, &c.	Average cubical contents per log.	Average amount per ton.	Remarks.
				Rs. A. P.	Rs. A. P.		Rs. A. P.	
	Pegu.							
Round logs	Yatthits	2,912	61,436	33,571 3 11	11 8 5	28	20 9 3	
	Loozars	5,983	2,32,352	1,80,059 2 6	34 1 3	44	38 11 7	
	Doogies	4,651	2,55,705	1,79,892 0 6	38 10 10	55	35 2 6	
	Yard, mast, keel and stem pieces	409	35,992	20,271 8 0	49 9 0	92	26 14 11	
	Doos, Doodoos and Thokes	11	440	260 0 0	23 10 2	40	29 8 8	
Squares	Short pieces	280	560	1,632 0 0	6 0 0	20	15 0 0	
Small pieces	Timber sold on half profit principle	680	36,622	18,060 0 0	26 8 9	54	24 9 3	
		14,226	6,43,107	4,33,795 14 11	30 7 10	...	33 11 7	
	Confiscated, drift and waif	993	35,316	17,996 4 0	18 1 11	36	25 2 7	
	Woods of other kinds—logs	1,948	77,920	25,779 5 9	13 3 9	40	16 8 8	
	Refuse teak worked out by Railway and other Departments, Natthat and Aulay	748	11,871	2,750 11 8	3 10 10	15	12 4 1	1,787 in number.
	Teak slabs	...	...	132 12 0	...	...	...	
	Sleepers teak	4,511	6,786	7,977 12 0	1 11 11	1·5	58 2 6	
	Do. other kinds...	176	325	124 0 0	0 11 1	1·8	19 3 10	
	Scantlings do.	978	1,000	600 11 3	0 9 10	1	30 11 8	
	Do. teak	200	2,025	1,819 1 1	9 1 6	10	45 7 6	
		5,867	10,136	10,421 8 4	...	...	...	
	Bamboos	...	...	481 5 0	...	...	...	136,019 in number.
	Canes	...	...	28 0 0	...	...	...	28 ditto.
		23,782	7,78,360	4,91,395 13 8				
	Sum received as fees on permits for woods of other kinds, and only on such timber as passed the Revenue station during the year ...	...	...	61,442 4 10				
	On all other minor forest produce	...	...	18,689 8 3				
	Miscellaneous	...	...	38,533 15 6				
	Timber made over to claimants	...	...	30,366 4 0				
		...	...	6,40,437 14 3				
	Deduct amount due but not realised during the year	...	...	9,117 0 0				
		...	...	6,31,320 14 3				
	Add amount realized on account of former year ...	...	...	24,196 8 6				
	Total revenue, Pegu circle, as per form No. 49 ...	...	...	6,55,517 6 9				
	Grand Total, British Burma, as per form No. 49...	...	...	11,37,562 3 11				

FORM No. 58.—*Statement shewing the amount expended on the different classes of timber and other produce brought to the Depôt during the year 1878-79.*

PARTICULARS OF TIMBER.	NUMBER OF		EXPENDITURE.			AVERAGE.			REMARKS.
	Pieces.	Cubic contents.	Timber Expenses.	Quota of all other expenditure chargeable against timber.	Total amount chargeable against timber.	Amount per piece.	Cubic contents per piece.	Amount per ton.	
TENASSERIM CIRCLE.			Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	
Doogles ...	4,297	2,51,050	96,612 2 6	4,825 5 3	1,01,437 7 9	12 1 9	58	.....	
Loosars ...	860	34,400					40	.....	
Yatthits ...	126	3,276					26	.....	
Pieces ...	2,752	50,575					18	.....	
Crooks ...	340	7,112					20	.....	
Total ...	8,375	346,413	96,612 2 6	4,825 5 3	1,01,437 7 9	12 1 9	41	14 10 3	
Confiscated drift and waif ...	6,818	170,450	19,819 3 0	18,000 0 0	37,819 3 0	5 8 9	25	11 1 6	
Squares ...	221	11,266	5,002 2 8	.....	5,002 2 8	14 1 5	51	13 14 11	
Scantlings ...	115	5,786					50		
Shingles ...	19	944					50		
Total ...	355	17,996	5,002 2 8	.....	5,002 2 8	14 1 5	50	13 14 11	
Woods, other than Teak ...	583	15,503	8,894 1 6	.....	8,894 1 6	15 4 1	26	28 11 0	
Hard wood sleepers ...	6,364	21,524	21,805 6 6	500 0 0	22,305 6 6	3 8 0a	3	51 13 11a	a Includes freight, &c., paid to Calcutta.
Amount chargeable against timber ...	22,495	571,686	152,133 0 2	23,325 5 3	1,75,458 5 5				
Ditto ditto to other expenditure ...	....	.....	.....	.....	21,738 2 7				
Ditto ditto to formation, protection and improvement of Forests ...	.....	.....	.....	.....	49,6[illegible]5 15 7				
					2,46,882 7 7				
Deduct expenditure in 1877-78, on account of 1878-79 ...					49,188 8 2				
					1,97,693 15 5				
Add expenditure in 1878-79, to account of 1879-80... ...					26,164 9 4				
Total as shown in form No. 49 ...					2,23,858 8 9				

Form No. 68—concluded.

Particulars of timber.	Number of		Expenditure.			Average.			Remarks.
	Pieces.	Cubic contents.	Timber expenses.	Quota of all other expenditure chargable against timber.	Total amount chargeable against timber.	Amount per piece.	Cubic contents per piece.	Amount per ton.	
Pegu Circle.			Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	
Round Logs ... Yatthits ...	3,457	100,353	29,091 9 6	4 4 5 per log	.....	12 11 0	29	21 14 0	
Round Logs ... Loozars ...	4,870	214,280	51,296 14 4		.....	14 12 11	44	16 13 2	
Round Logs ... Doogies ...	2,422	138,054	40,178 4 6		.....	20 13 10	57	18 4 10	
Round Logs ... Yard, mast, keel and stem pieces	78	7,176	2,410 8 0		.....	35 2 10	92	18 8 2	
Squares and Small Logs. Squares, Doodoos, Crooks and short pieces ...	346	6,920	1,506 6 0		.....	8 10 1	20	21 9 2	
Total ...	11,173	466,683	1,24,483 9 10	47,796 15 1	1,72,280 8 11	15 6 8	42	18 7 0	
Unclassified timber brought to main streams and taken charge of, ...	4,510	181,331	20,988 10 0	8,720 9 3	29,709 3 3	6 9 5	40	8 3 6	
Woods of other kinds ...	1,738	72,575	18,185 10 1	4,308 3 0	22,493 13 1	13 0 3	42	15 7 11	
Refuse teak worked out by Railway and other Departments.	657	10,626	.....	530 0 0	530 0 0	.....	16	2 8 0	
Timber worked out by Purchasers, Natthato and Aulay ...	91	1,245	.....	62 8 0	62 8 0	.....	13	2 8 0	
Drift, confiscated and waif ...	11,531	461,240	20,887 7 7	7,843 8 9	28,731 0 4	2 7 10	40	3 1 9	
Scantling other kinds ...	978	1,000	.....	50 0 0	50 0 0	.....	...	2 8 0	
Scantling teak ...	231	3,065	90 11 0	61 13 0	152 8 0	.....	13	2 8 0	
Half profit principle { Teak ... Other kinds ...	1,276 340	80,800	.....	7,920 1 8	7,920 1 8	4 14 5	50	4 14 5	
I. Total expended by direct Government Agency ...	32,515	1,278,565	1,84,636 0 6	77,293 10 9	2,61,929 11 3	.....	...	.....	
II. Do. chargeable to other Revenue ...	.....	.....	.....	.....	52,389 5 10	.....	...	.....	
III. Do. to formation, protection and improvement of Forests ...	.....	.....	.....	.....	83,158 6 10	.....	...	.....	
Total ...	.....	.....	.....	.....	3,97,477 7 11	.....	...	.....	
Total as exhibited in form No. 49 ...	.....	.....	.....	.....	4,94,542 6 10	.....	...	.....	
Deficit ...	.....	.....	.....	.....	97,064 14 11	.....	...	.....	
Accounted for thus—									
Due on timber of 1878-79 to be paid in 1879-80 ...	.....	.....	.....	.....	21,960 4 9	.....	...	.....	
Excess charges of 1877-78 paid in 1878-79 ...	.....	.....	.....	.....	75,104 10 2	.....	...	.....	
	.....	.....	.....	.....	47,064 14 11	.....	...	.....	
Total ...	55,010	1,850,451	36,769 0 8	1,00,619 0 0	4,37,388 0 8	.....	...	.....	

FORM No. 59.—*Statement shewing Revenue derived from and Expenditure incurred on Timber and other produce sold to Public Departments from Depôt during the year 1878-79.*

Division.	Name of Department.	Particulars of supplies.	Amount supplied.	Rate. At	Rate. Per	Amount of Revenue. Due.	Received.	Outstanding.	Cost to Forest Department. Timber expenses under A.I.	Quota of all other expenditure chargeable against timber, &c.	Total.	Comparison of Revenue and Expenditure. Surplus.	Deficit.	Remarks.
			Tons Ft. In. P.	Rs.		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Salween.	Dock-yard, Calcutta ...	200 crooks... ...	108 32 0 0	8	Crook	1,600 0 0	1,600 0 0	...	1,322 0 0	230 0 0	1,552 0 0	48 0 0	...	
		Total ...	108 32 0 0	...	...	1,600 0 0	1,600 0 0	...	1,322 0 0	230 0 0	1,552 0 0	48 0 0	...	
	Gun-carriage Factory, Bombay	Squares	138 29 1 8	60	Ton	8,314 15 0	8,314 15 0	...	4,500 0 0	5,284 10 5	11,184 10 5	6,700 5 7	...	
		Padouk	76 28 0 3	125	„	9,570 1 0	9,570 1 0	...	1,400 0 0					
		Total ...	215 7 1 11	...	...	17,885 0 0	17,885 0 0	...	5,900 0 0	5,284 10 5	11,184 10 5	6,700 5 7	...	
	Consulting Architect, Madras	Squares	8 7 6 3	198	Ton	976 0 6	550 12 10	459 15 8	570 0 0	358 7 0	928 7 0	82 5 6	...	
		Scantlings ...	0 14 5 9	120	„	34 12 0								
		Total ...	8 22 0 0	...	...	1,010 12 6	550 12 10	459 15 8	570 0 0	358 7 0	928 7 0	82 5 6	...	
	Jail Department, Moulmein.	19 logs Padouk ..	11 40 2 3	45	Ton	531 2 8	531 2 8	...	266 0 0	...	266 0 0	265 2 8	...	
		63 Thoungyeen teak	47 44 0 0	From 7 to 15-8	„	632 8 0	632 8 0	..	595 0 0		595 0 0	37 8 0	...	
		180 logs teak ...	...	„ 4 to 15	„	1,943 0 0	1,943 0 0	...	...	523 3 0	523 3 0	1,419 13 0	...	
		Total ...	59 34 2 3 and 180 logs.	...	...	3,106 10 8	3,106 10 8	...	861 0 0	523 3 0	1,384 3 0	1,722 7 8	...	
		Total, Tenasserim ...	391 45 4 2 and 180 logs.	...	...	23,602 7 2	23,142 7 6	459 15 8	8,653 0 0	6,396 4 5	15,049 4 5	8,553 2 9	...	
										Deduct deficit ...		...	...	
										Balance for the Department ...		8,553 2 9	...	
Prome.			C. ft.	Rs. A.										
	Executive Engineer, Prome division.	Theya squares ..	646	35 0	Ton	451 8 0	451 8 0	...	250 0 0	32 4 9	282 4 9	169 3 3	...	
		Duty on Theya and Engyin logs	488	4 8	„	43 15 3	43 15 3	...	...	19 8 3	19 8 3	24 7 0	...	
		Trade permit of Theya and Engyin.	Logs 20	0 8	Each	10 0 0	10 0 0	...	..	...	...	10 0 0	...	
	Executive Engineer, Henzada	Teak logs	1,281	35 0	Ton	896 0 0	896 0 0	...	..	87 14 10	87 14 10	808 1 2	...	
		Total ...	2,415 C. ft. and 20 logs.	...	...	1,401 7 3	1,401 7 3	...	250 0 0	139 11 10	389 11 10	1,011 11 5	...	

Form No. 59.—concluded.

Division.	Name of Department.	Particulars of supplies.	Amount supplied.	Rate. At	Rate. Per	Amount of revenue. Due.	Received.	Outstanding.	Cost to Forest Department. Timber expenses under A.I.	Quota of all other expenditure chargeable against timber, &c.	Total.	Comparison of revenue and expenditure. Surplus.	Deficit.	Remarks.
				Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Tharrawaddy.	Rangoon and Irrawaddy Valley (State) Railway.	Teak I. class ...	43·44 tons	55 0 0	Ton	2,389 3 0	2,389 3 0	...	439 2 0	152 10 0	591 12 0	1,849 15 0	...	
		Do. II. „ ...	1·25 „	35 0 0	„	53 8 0	53 8 0							
		Teak squares ...	15·1 „	40 0 0	„	600 12 9	600 12 9							
		Ditto ...	21· „	50 0 0	„	1,050 0 0	1,050 0 0	...	667 4 9	127 4 9	794 9 6	896 3 3	...	
		Squared teak ...	1· „	40 0 0	„	40 0 0	40 0 0							
	Department of Public Works, Tharrawaddy division.	Pyinkadoe ...	200 logs	0 8 0	Each	100 0 0	100 0 0	...	...	...	...	100 0 0	...	
		Engyin	50 „	0 8 0	„	25 0 0	25 0 0	...	...	...	...	25 0 0	...	
		Pyinkadoe and Engyin	34 „	4 8 0	Ton	153 0 0	153 0 0	...	...	68 0 0	68 0 0	85 0 0	...	
	Superintendent of Police, Tharrawaddy division.	Pyinkadoe ...	15 „	0 8 0	Each	7 8 0	7 8 0	...	...	...	...	7 8 0	...	
		Pyimma	25 „	0 4 0	„	6 4 0	6 4 0	...	...	...	...	6 4 0	...	
	Sub-Assistant Superintendant, Telegraphs ...	Pyinkadoe ...	32 „	1 0 0	„	32 0 0	32 0 0	...	...	...	...	32 0 0	...	
		Total ...	81·79 tons and 356 logs.	...	...	4,456 3 9	4,456 3 9	...	1,106 6 9	347 14 9	1,454 5 6	3,001 14 3	...	
Western.	Jail Department, Bassein ...	Thitkadoe ...	3 in No.	17 8 0	Ton	38 8 0	38 8 0	...	24 0 0	638 3 2	3,798 4 1	1,227 3 11	...	
		Kanyin	149 „	12 0 0	Each	1,788 0 0	1,788 0 0	...	1,286 0 11					
		Thitka	256 „	17 8 0	Ton	3,199 0 0	3,199 0 0	...	1,850 0 0					
	Public Works Department.	Pyinkadoe ...	10 „	7 0 0	Each	70 0 0	70 0 0	...	42 0 0	10 0 0	52 0 0	18 0 0	...	
	Superintendent, Myanoung Lock-up ...	Teak planks ...	12 „	...	...	50 0 0	50 0 0	...	...	...	...	50 0 0	...	
		Total ...	430 No.	...	...	5,145 8 0	5,145 8 0	...	3,202 0 11	648 3 2	3,850 4 1	1,295 3 11	...	
	Executive Engineer, Tharrawaddy division.	Pyinkadoe, Theyn, Eng. &c. ...	838 No.	0 8 0	Each	414 0 0	414 0 0	...	...	...	...	414 0 0	...	
		Pyinkadoe ...	391 tons	4 8 0	Ton	1,759 8 0	1,759 8 0	...	...	15 10 2	15 10 2	1,743 13 10	...	
		Total ...	838 pieces and 391 tons.	...	...	2,173 8 0	2,173 8 0	...	...	15 10 2	15 10 2	2,157 13 10	...	
		Total, Pegu ...	...	...	...	13,176 11 0	13,176 11 0	...	4,556 7 8	1,151 7 11	5,709 15 7	7,466 11 5	...	
		Grand Total ...	...	...	...	36,779 2 2	36,319 2 6	459 15 8	13,211 7 8	7,547 12 4	20,759 4 0	16,019 14 2	...	

Form No. 60.—*Abstract shewing the value of timber and of live and dead stock for the year 1878-79.*

Description of timber and other stock.	On hand at commencement of the year.		Received during the year.		Total		Sold or otherwise disposed of, and lost during the year and allowance for depreciation.		On hand at the close of the year.		Cause of loss and other particulars.
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	
		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.	
Timber Stock	8,466	2,14,695 10 5	23,130	1,88,638 4 0	31,596	4,03,333 15 4	14,092	2,31,225 15 4	17,504	1,72,107 15 1*a*	*a* Includes the value of the Admiralty cargo, *viz.*, Rs. 92,234-7-5.
Live do	3	3,300 0 0	1	1,800 0 0	4	5,100 0 0	1*b*	700 15 4	3	4,400 0 0	*b* Died
Buildings	13	9,526 12 0	5	3,022 1 0	18	12,548 13 0	1	80 0 0	17	12,468 13 0	
Dead Stock	...	4,600 0 0	...	998 15 0	...	5,598 15 0	...	349 0 0	...	5,249 15 0	
Kadoe duty	...	1,62,148 12 0	...	1,43,861 0 0	...	3,06,009 12 0	...	2,29,536 8 0	...	76,473 4 0	
Total, Tenasserim Circle .	..	3,94,271 2 5	...	3,38,320 4 0	...	7,32,591 6 5	...	4,61,891 7 4	...	2,70,699 15 1	
Timber Stock	27,017	4,59,517 0 0	31,522	4,80,713 0 0	58,539	9,40,230 0 0	36,577	5,21,963 0 0	21,962	4,18,967 0 0	
Live do	48	54,600 0 0	10	13,912 0 0	58	68,512 0 0	16*d*	15,312 0 0	42	53,200 0 0	*d* Sold or made over to contractors, 12; died, 4.
Buildings	32	34,162 0 0	4	9,385 0 0	36	43,547 0 0	1	5,811 0 0	35	37,736 0 0	Offices at Pegu and Poungday in course of construction, but not completed at close of year.
Dead Stock	...	14,028 0 0	...	3,513 0 0	.	17,541 0 0	...	1,018 0 0	...	16,523 0 0	
Total, Pegu Circle ...	...	5,82,307 0 0	...	5,07,523 0 0	...	10,69,830 0 0	...	5,43,404 0 0	...	5,26,426 0 0	
Grand Total ...	...	9,56,578 2 5	.	8,45,843 4 0	...	18,02,421 6 5	...	10,05,295 7 4	...	7,97,125 15 1	

APPENDIX A.

Statement of Teak trees girdled and Forest work done in season 1878-79.

Name and number of Section.	Name of Revising Officer.	Forest.	Sub-district.	Trees girdled.	First class trees estimated.	Trees counted by Revising Officers.		Percentage of girdled trees counted.	Percentage of first class trees girdled.	Creepers cut.	Young teak cleared.	Other trees girdled.	Other kinds of trees felled.
						Trees girdled.	First class trees.						
Tenasserim, Salween Division.	Major W. J. Seaton	Maiplay	Teesara...	102	...	204	...	...	...	5	...	109	24
			Bawthaloo	102	...								
	Lieutenant C. T. Bingham	ditto	Bawthaloo	178	...	178	...	...		25	...	75	7
			Mowahmai and Laikhpoo	142	...	142	...	...		13	...	35	5
	Mr. T. H. Aplin	ditto	Wah-clo and Kaloklo, choungs, feeder of Mek-kanay ...	117	...	117	...	...	From 20 to 60 per cent.	4	...	46	32
			Pah-choung, feeder of Mek-kanay	82	...	82	...	...		4	...	29	12
			Pawkhaphoo Hteetola, &c., feeders of Bathaloo and Hteedogwee	181	...	181	...	...		16	...	35	48
			Near the sources of the Thingannee-noung river ..	30	..	30	...	...		51	...	33	16
			Total ...	934	...	934	...	...	...	118	...	362	144

APPENDIX B.

Statement of Toungya Plantations in the Tenasserim Circle.

Year of formation.	Name of reserve.	Forest Tract.	Area in acres.	Number of plants.	Average number of plants per acre.	Cost up to 1877-78.		Cost during 1878-79.		Total cost.	Average cost per acre up to 1878-79.
						Original cost.	Maintenance.	Original cost.	Maintenance.		
						Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
1869-70 to 1877-78	Sinzway	Younzaleen	294	57,066	194	1,444 4 2	531 8 0	.....	101 2 8	2,076 14 10	7 1 0
1878-79	Ditto	Ditto	90	57,763	641	.....	.....	768 3 8	.....	768 3 8	8 8 6
1877-78	Wamoo	Ditto	2	42	21	5 0 0	7 0 0	.....	.....	12 0 0	6 0 0
1877-78	Oankanjee	Doomdamee	8	2,865	358	86 6 3	16 10 0	.....	.....	103 0 3	12 14 0
1878-79	Ditto	Ditto	8	3,813	476	.....	.....	47 4 11	.....	47 4 11	5 14 7
1877-78	Beelakatgyee	Ditto	5	69	14	69 0 0	.....	.....	.....	69 0 0	13 12 9
1878-79	Ditto	Ditto	8	3,148	393	.....	.....	42 3 1	.....	42 3 1	5 4 4
1877-78	Mainanway	Beeling	3	62	20	25 0 0	.....	.....	.....	25 0 0	8 5 4
1878-79	Ditto	Ditto	20	706	35	.....	.....	43 9 6	.....	43 9 6	2 2 10
1878-79	Maiwine	Ditto	45	8,913	198	.....	.....	120 15 4	.....	120 15 4	2 11 0
1877-78	Dalley	Attaran	35	9,370	267	41 0 0	117 15 0	.....	.....	158 15 0	4 8 7
1878-79	Ditto	Ditto	11	4,791*a*	435	.....	.....	.....	.....	.....	.....
		Total	529	1,48,608	280	1,670 10 5	673 1 0	1,022 4 6	101 2 8	3,467 2 7	6 8 10

a Payment due for planting.

APPENDIX C.

Statement of Permits for Reserved Woods issued during the year 1878-79.

District.	By whom issued.	Form of Permit.	Description of timber.	Number of logs.	Amount of Permit Fee. Rs.	A.	P.	Number of logs passed.	Cubical contents. Tons.	Ft.	I.	P.	Amount of purchase money. Rs.	A.	P.
Amherst.	Deputy Conservator of Forests ..	"B" Trade Permit.	Thingan	1,583	791	8	0	940	1,688	42	4	3	7,611	13	7
			Pyinkadoe	465	232	8	0	382	99	46	11	2	450	8	0
			Pyimma	943	235	12	0	640	448	9	4	0	900	9	4
			Eng	654	163	8	0	214	84	13	8	10	168	12	8
			Anan	36	18	0	0	24	9	26	4	7	42	14	0
			Padouk pieces and branches... ...	..		...		134	27	29	10	11	124	10	0
			Thitka	..		...		3	3	10	7	3	14	8	0
			Total ...	3,681	1,441	4	0	2,337	2,361	29	3	0	9,313	10	11
	Deputy Commissioner.	"B" Trade Permit.	Thingan	136	69	0	0								
			Pyinkadoe	25	12	8	0								
			Pyimma	7	1	12	0								
			Total ...	170	83	4	0								
	Deputy and Extra Assistant Commissioner.	"A" Free Permit.	Thingan	74											
			Pyinkadoe	1,298											
			Pyimma	262											
			Anan	38											
			Eng	224											
			Engyeen	71											
			Thitya	88											
			Kokoh	1											
			Total ...	2,056											
Meiggi.	Forest Ranger ...	"B" Trade Permit.	Thingan	96	48	0	0	202	245	38	3	7	1,106	6	8
			Anan	2	1	0	0								
			Pyimma	20	5	0	0	18	5	25	0	0	11	0	0
			Total ...	118	54	0	0	220	251	13	3	7	1,117	6	8
		"A" Free Permit.	Thitya	14											
			Anan	15											
			Kanyin	1											
			Thingan	45											
			Total ...	75											
Bavoy.	Deputy Commissioner	"B" Trade Permit.	Thingan	87	36	0	0	40	45	12	11				
			Pyinkadoe	97	25	0	0	51	10	27	7	0			
			Padouk	15				3	2	16	7	0			
			Total ...	199	61	0	0	94	58	7	1	0	261	9	9
		"A" Free Permit.	Thingan	107											
			Pyinkadoe	99											
			Ahnyeen	3											
			Thitya	6											
			Pyimma	124											
			Total ..	337											
			Grand Total ..	6,636	1,639	8	0	2,651	2,670	49	7	7	10,692	11	4

APPENDIX D.

Statement exhibiting cost of Feed and Keep of Elephants of the Forest Department, for the official year 1878-79, as compared with that of the Commissariat Department for the same period.

Name of Divisions.	Number of Elephants kept.	Total cost of feed for the year.	Total cost of keep for the year.	Amount paid for year.	Medicines.	Total expenditure.	Average cost for each animal per annum.	Average cost of a Commissariat Elephant per annum.	Average cost per animal of the Forest Department per mensem.	Average cost per animal of the Commissariat Department per mensem.	Value of labour in each receipts and work performed.	Remarks.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Salween	2	768 2 0	1,083 0 0	162 0 0	118 12 0	2,081 14 0	1,040 15 0	556 4 0	86 11 11	46 5 8	2,834 14 0	
South Tenasserim	1	164 6 0	252 0	0 4 0	6 8 0	423 2 0	423 2 0		35 4 2		262 0 0	
Total, Tenasserim ...	3	932 8 0	1,285 0 0	162 4 0	125 4 0	2,505 0 0	.....	.....	.....	.....	3,096 14 0	
Rangoon	16	4,819 11 0	4,431 13 7	565 12 7	375 1 0	10,122 6 2					12,540 0 0	
Tharrawaddy	10	694 0 0	2,577 14 1	194 7 9	43 8 6	3,509 14 4					6,390 0 0	
Prome	2	268 15 6	711 5 3	26 8 8	26 8 0	1,033 5 5					1,448 0 0	
Sittang	2	151 0 11	768 3 4	57 0 0	7 1 0	983 5 3	508 1 3	489 1 3	42 5 5	40 12 1	596 0 0	
Western	2	267 15 6	598 7 4	46 7 9	48 6 0	901 4 7					2,203 0 0	
Shwe-gyeen	2	61 10 3	398 3 0	200 1 8	4 8 0	664 6 11					405 0 0	
Total, Pegu ...	34	6,263 5 2	9,415 14 7	1,090 6 5	505 0 6	17,274 10 8	.....	.....	.....	.....	23,582 0 0	
GRAND TOTAL ...	37	7,196 13 2	10,700 14 7	1,252 10 6	630 4 6	19,779 10 8	.....	.....	.....	.....	26,678 14 0	

APPENDIX E.

List of Buildings in the Tenasserim and Pegu Forest Circles, the cost of which exceeds Rs. 200, and for the occupation of which no rent is paid.

Division.	Number.	Name of buildings.	Station.	Remarks.
		TENASSERIM CIRCLE.		
KADOE	1	Guard-house	Martaban.	
	2	Ditto	Moulmein.	
	3	Office and two out-houses	Kadoe.	
	1	Lascar's house	Do.	
	1	Upper guard-house	Do.	
	1	Lower guard-house	Do.	
	1	Guard-house	Nantay.	
SALWEEN	1	Bungalow	Kaukariet.	
	1	Ditto	Pahpoon.	
	1	Rest-house	Kya-en.	
	1	Elephant-shed	Moulmein.	
	1	Paddy-shed	Do.	
SOUTH TENASSERIM	1	Office	Mergui.	
	1	Guard-house	Tavoy.	
		PEGU CIRCLE.		
RANGOON	1	Road bungalow	Magayee.	
	1	Plantation bungalow	Magayee.	
	1	Ditto ditto	Kyetphyoogan.	
	3	Revenue station-houses	Khyassoo. Zoungtoo and Taulatai	One at each station.
	2	Ditto ditto	Awine and Hlaigoo	Ditto.
	1	Forest office	Pegu	In course of construction.
CENTRAL DEPÔT, RANGOON	1	Central depot	Kemindine, Rangoon	
	1	Overseer's quarters	Ditto	One at Poozoondoung, a temporary shed demolished owing to the construction of Monkey Point Battery.
	6	Guard-houses	Ditto	
	1	Mahouts house	Ditto	
	1	Elephant-shed	Ditto	
	1	Seasoning-shed	Ditto	
PROME	1	Forest office	Prome	This building is partly occupied by Forest Officers but no rent is charged.
	2	Rest-houses		
THARRAWADDY	2	Rest-houses	Kadin-nga-tsin and Tounglay	One at each.
			(1) Quingyee, (2) Enxine, (3) Joebenine, (4) Saingally, (5) Boben, (6) Wyne, (7) Tsanyuai, (8) Quaymakeing, (9) Koung-loung dine.	
	1	Forest office	Poungday	In course of construction.
SITTANG	1	Rest-house	Pyoon choung.	
	1	Forest office	Toungoo.	
SHWE-GYEEN	1	Forest office	Shwe-gyeen.	

PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN

BRITISH BURMA

FOR

1879-80,

By Major W. J. SEATON, M.S.C.,
CONSERVATOR OF FORESTS.

WITH A REVIEW BY THE CHIEF COMMISSIONER AND ORDERS BY THE GOVERNMENT OF INDIA.

1880.

No. 733F., dated Simla, the 9th November 1880.

From—The Honourable C. Grant, C.S., Offg. Secretary to the Govt. of India, Home, Revenue and Agricultural Department,

To—The Chief Commissioner of British Burma.

I am directed to acknowledge the receipt of Mr. Kynoch's letter No. 6082, dated the 3rd September last, forwarding the Annual Report of Forest Administration in British Burma for 1879-80, with a detailed review by yourself. It will suffice to offer the following observations regarding the report for your consideration.

2. The area of the demarcated reserves was increased during the year by 202 square miles, the chief additions being 9 square miles in the Attaran Forests, 125 on the hills of the Pegu Yoma in the Thayetmyo district, and 67 in the northern part of the Toungoo district. Not including 170 square miles assigned to Karens for Toungya cultivation in the Tharrawaddy district, the demarcated reserves at the close of the year aggregated 1,442 square miles.

The Governor General in Council cordially assents to the opinion, expressed in paragraph 2 of your review, that due provision must be made for satisfying the people living in the forests and in their vicinity, before lands are finally demarcated as reserves. The duty of ascertaining the requirements of the people must be performed in a thorough and detailed manner; but at the same time it should be pushed on steadily and with as much expedition as possible. This is desirable, not only in order to place the administration of the forests upon a safe basis, but also in order to facilitate the clearing of land outside the reserved forests for permanent cultivation.

3. The progress of fire protection hitherto made in the British Burma forests has been slow. The results during the last four years have been as follows:—

	Area in acres.		
	Attempted.	*Protected.*	*Outlay.*
			Rs.
1876-77 ...	88,096	70,792	16,674
1877-78 ...	84,215	68,198	8,100
1878-79 ...	74,867	71,322	9,816
1879-80 ...	98,637	96,413	8,837

More rapid success need not, however, be insisted upon, provided that the progress is steady and the outlay is kept within moderate limits. The season was favourable on account of the heavy rains in April. It is satisfactory to learn that the teak plantations were successfully protected; but it is to be regretted that, of the forest area, the protection of which was attempted, 799 acres were burnt in the Attaran forest, 600 in Nyanleh and 450 in the Choungzouk forest. A detailed account of these fires is recorded in the report and should always be given whenever a similar failure in fire protection should occur in future.

4. The total area of teak plantations at the close of the year, both regular and Toungya plantations, is reported as follows:—

	Area in acres.			
	Pegu.	*Tenasserim.*	*Total.*	*Total outlay from commencement.*
				Rs.
Regular plantations ...	3,372	17	3,389	3,00,689
Toungya plantations ...	1,950	565	2,515	24,932
Total ...	5,322	582	5,904	3,25,621

It is presumed that the whole of this area is well stocked, and that, generally, the teak has been planted in localities suitable for its growth, where

the trees may reasonably be expected to attain a large size and to form valuable timber. If so, an important advance has already been made towards securing for the future an increased supply of timber from these planted areas.

5. Although regular plantations may have certain important advantages, yet the much lower cost of Toungya plantations indicates the expediency of extending these latter on a larger scale. Under these circumstances, it may be well to clear up a misconception, which, it is gathered from paragraph 5 of your Review, is still entertained in Burma regarding the intentions of the Government of India in this respect.

6. When, in February 1876, the Government of India remarked that the State reserves, which had then been demarcated were more or less encumbered with Toungya cultivation, it was said that it seemed "desirable to discontinue the system of planting teak in Toungyas at present, except within such reserves as are permanently protected from fire." Again, in paragraph 11 of the orders on the report for 1875-76, it was said "in forests where protection from fire is secured, the cultivation of teak, whether by Departmental agency or on Toungyas through the agency of the Karens, or on natural blanks in the forest caused by the seeding of bamboos or other causes, should be extended, as far as competent supervision is available."

Letter No. 168, dated the 25th February 1876.

Letter No. 1352, dated the 18th December 1876.

The data recorded in paragraph 95 of the report for 1879-80 regarding the arrangements made for, and the outlay incurred on, protecting from fire the detached Toungya teak plantations in the Mokka, Minhla and Gway-douk-san forests, and the abandonment of seven smaller plots in the Shway-lay, Toungnyo and Baw-bin forests, illustrate the necessity of concentrating these operations in forests permanently protected from fire.

7. Again, when remarking upon the privilege granted to Karens to cut Toungyas in the Beeling-Mainanway and Kaheloo reserves on condition of planting teak, the Government of India in no way prohibited the planting of teak in Toungyas, but merely said that if it was intended to employ the Karens or others in this manner, special arrangements should be made, but that to grant the privilege of cutting Toungyas would always be a source of danger to the forest.

Letter No. 143F., dated the 7th February 1879.

8. In demarcated reserves regularly protected from fire, the extension of teak Toungya plantations should by all means be encouraged, and it is satisfactory that so large an area as 320 acres have been added to the plantations during the year under review.

9. The outturn of the year is stated in paragraphs 34 to 37 of the report to have been as follows:—

	Tenasserim.	*Pegu.*	*Total.*
	(Tons of 50 cubic feet.)		
Teak brought to depôt on account of Government ...	5,350	10,668	16,018
Teak worked out by purchasers, or disposed of locally ...	...	222	222
Teak brought from the Attaran and Pandaw forests ...	1,345	...	1345
Total teak ...	6,695	10,890	17,585
Other timber brought to depôt on account of Government	756	378	1,134
Sleepers of other timber brought to depôt on account of Government	564	...	564
Total timber ...	8,015	11,268	19,283

10. These figures seem to agree with the entries in Statements Nos. 55, 55A and 56, which are appended to the report, but they do not include any of the drift timber which remained unclaimed and was sold on account of Government. A portion of this timber probably came from the Government forests. A note at the foot of Statement No. 56 includes drift timber in the outturn of the Pegu

and Tenasserim Circles. The quantity of drift and confiscated timber entered in the Statements appended to the Report, and the quantity delivered to claimants during the year, were as follows:—

	Tenasserim.	*Pegu.*	*Total.*
		(Cubic feet).	
Teak—confiscated, drift and waif	116,485	402,369	518,854
Teak delivered to claimants	67,336	334,204	401,540
Balance ...	49,149	68,165	117,314
In tons of 50 cubic feet ...	983	1,363	2,346

Besides this 1,496 cubic feet of other kinds are recorded as drift timber in Pegu. Apparently, therefore, some addition should be made to the outturn of teak and other timber recorded in paragraph 34 of the report.

11. The arrangement of the timber returns, as well as of the report generally, is not good, and the Inspector General of Forests has been directed to place himself in direct communication with you and the Conservators of Forests on the subject, with the view of submitting for your consideration suggestions for their improvement.

12. Under the system of trade and free permits, the following quantities of timber of the reserved kinds are recorded to have been removed from the forests during the three years 1877-78, 1878-79 and 1879-80:—

	Trade permits.	Free permits.
1877-78	50,099 trees.	71,714 trees.
1878-79 Tenasserim ...	2,654 logs.	2,468 logs.
„ Pegu	11,208 trees.	45,445 trees.
Total ...	13,862 trees and logs.	47,913 trees and logs.
1879-80 Tenasserim ...	5,226 trees.	5,226 trees.
„ Pegu ...	29,812 „	86,451 „
Total ...	35,038 „	91,677 „

These figures indicate either an exceptionally small demand during 1878-79 for the reserved kinds, for which permits are issued, or defective control during that year. Paragraph 28 of the report seems to indicate that the returns are incomplete. This may to some extent account for the fluctuations. It is very important that a correct record of these transactions should be preserved.

13. The imports and exports of teak timber into and from British Burma are nowhere stated in the report in a comprehensive manner, so as to furnish at a glance results similar to those noted in paragraph 17 of the orders on the report for 1878-79. The following figures have been collected from paragraphs 260, 285 and 286:—

Imports in tons of 50 cubic feet from beyond the frontier.

By the Salween River	127,544
Sitang „	26,030
Irrawaddy „	3,686
Total ...	157,260

Exports in tons of 50 cubic feet.

	To Foreign ports.	*To Indian ports.*	*Total.*
From Moulmein	...	...	97,415
„ Rangoon	6,561	17,185	23,746
Total	...	...	121,161

This is somewhat less than the average annual exports during the five years from 1874-75 to 1878-79, which in Statement I, appended to Mr. Brandis' report, are stated to have amounted to 134,563 tons.

14. According to previous reports and according to paragraph 262 of the present report, the foreign imports into Moulmein and Rangoon during the last four years have been as follows :—

	Moulmein.	*Rangoon.*	*Total.*
1876-77 ...	117,170	42,228	159,398
1877-78 ...	149,049	59,149	208,198
1878-79 ...	119,211	51,399	170,610
1879-80 ...	127,544	29,716	157,260

In order to form a reliable estimate of the imports of timber, it is necessary to compare cubic contents and not the number of logs only. The import of timber into Rangoon has been unusually low during the year under review, and it would be well to enquire whether this falling off was not due to some special causes. As regards the imports into Moulmein there appears to have been no great falling off as compared with previous years. The forests beyond the frontier which supply the Moulmein market have been worked for a much longer period than those on the Upper Irrawaddy and Sitang rivers in Burma Proper. One cause, and perhaps the chief cause, of the diminished imports and exports has, as the Conservator explains, been the long protracted depression in the price of teak timber. Judging from Messrs. Churchill and Sim's monthly circulars, the prices in London between March and November 1879 were from £8-10 to £10-15 per load of 50 cubic feet, and they only commenced to rise in December last. Major Seaton's statement in paragraphs 263 and 290 of his report regarding the ruin of numerous timber traders in Moulmein, in consequence of the long depression of prices, has been read with great regret.

15. The financial results have been slightly better than last year. Conservators of Forests in Burma should commence now to arrange and record the financial results of the year under the three great heads, "Government timber operations," "other branches of revenue" and "formation, protection and improvement of the forests." The arrangement adopted in this respect in the late annual reports of the Bengal and Assam forests may serve as guide.

16. The death of Mr. A. O. Brown, who did excellent service during several years as forest settlement officer in Pegu, has been a real loss to Government.

It is satisfactory that you are able to speak in favourable terms of the two Conservators and of their subordinate officers.

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REPORT

ON

THE FOREST ADMINISTRATION

OF

BRITISH BURMA

FOR

The year 1879-80.

RANGOON:

PRINTED AT THE GOVERNMENT PRESS.

1880.

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RESOLUTION

ON THE

FOREST ADMINISTRTION

OF

BRITISH BURMA

FOR THE YEAR 1879-80.

Extract from the proceedings of the Chief Commissioner, British Burma, in the Forest Department,—No. 5-185, dated the 20th August 1880.

READ—

Report on the administration of the forests in the Pegu and Tenasserim circles for the year 1879-80.

RESOLUTION.—The forest report for the year 1879-80 was submitted punctually on the date fixed, namely, the 1st July. The report and statements furnish full detail concerning the forest work of the year; and it is clear that divisional forest officers can, under proper arrangements, furnish their annual reports by the 15th May. The Chief Commissioner will therefore confidently expect the forest report to be hereafter punctually furnished in accordance with the precedent set this year. The present report is much split up into remarks on each division under every head of forest work; it would be well that the chapter entitled "Summary" should in future years contain a succinct and comprehensive sketch of the year's work.

2. The facts of the year's administration are grouped under three heads, namely—

I.—Reserved forests.
II.—Unreserved forests.
III.—General and financial.

First, with reference to

RESERVED FORESTS.

Demarcating reserves.

Much attention was given during the year to the work of adjudicating claims to forest land proposed for reservation; and three civil officers, in conjunction with Assistant Conservators, were employed on this duty during the open season. It is of the utmost importance that all claims should be heard, and all rights satisfied, before forest lands are finally marked off as "Reserves." When once the reserves have been settled and demarcated, they must remain as State forests to be worked and preserved as such for the benefit of present and future generations. There are in some of the best State forests settlements of jungle people, whose immemorial custom has been to waste and destroy the forests. Unless due provision is made for satisfying these people, and giving them means of livelihood outside the reserves, the demarcation gives rise to heartburning, and is liable to be challenged hereafter. The decision of these questions has caused delay in the final selection and demarcation of reserves; and the operations of the year have added only 202

square miles to the reserved forest area, which now stands at 1,272 square miles, besides 170 square miles of reserved forest in which Karen villagers are allowed temporarily to continue their shifting (toungya) cultivation. Proposals for the demarcation of areas in the Pegu circle, aggregating no less than 899 square miles, were in various stages of preparation for final sanction when the year closed: 218 square miles of this area have since been sanctioned and notified as State reserves, namely, the Oke-kan reserve (125 square miles) and the Hlaing Yoma reserve (93 square miles), both in the Rangoon division. The proposals for the reservation of these tracts were seen and approved by the Inspector-General of Forests during his recent tour in Burma, the Hlaing Yoma reserve being the outcome of correspondence in which the necessity was suggested of forming a fuel reserve in the neighbourhood of Rangoon. Paragraphs 102, 119, and 120 of the report show that, over and above the foregoing areas, there are large tracts ready in the Rangoon and Sittang divisions for the examination by civil officers next field season. The question of providing a fuel reserve in the Tharrawaddy division has not been overlooked. The Conservator was unable, without injustice to work for carrying out which he had already made arrangements, to take any steps in the matter during the past working season; but it is now receiving his attention. In the Tenasserim circle the demarcation officers examined an aggregate area of 128 square miles, final proposals for the reservation of which are now awaited. Besides this, a preliminary examination was made of 150 square miles in the East Salween, and of 30 square miles in the West Salween, division; and a civil officer will examine and submit proposals for the reservation of those tracts early next season.

3. A state of things such as is described at paragraph 210 of the present report makes it most desirable that the demarcation of the reserved forests should be judiciously and expeditiously pushed on. Very much in the way of demarcating State reserves still remains to be done. In the Sittang division, the Conservator estimates, that the work will occupy fifteen working seasons, during ten of which the services of a civil officer will be required. In Prome, five seasons will be occupied, involving the presence of a civil officer for a total period of sixteen months; one season will suffice for demarcation work in Tharrawaddy, five will be needed for Rangoon, five for Shway-gyin, and, as far as can yet be roughly estimated, four for the Western division. If two demarcation parties are at work steadily throughout each season and receive help from the district officers, the Conservator thinks that the demarcation of all reserves in his circle can be completed in twelve years. On the Tenasserim side, Major Seaton estimates that "there are 525 square miles of teak and other valuable "forest which may have to be demarcated;" and that if two civil officers are allowed, four seasons will suffice to finish it thoroughly. The work is far behind in Pegu, and its rapid completion is a matter of such importance that special arrangements will be attempted in order to accomplish the business in a shorter time than Mr. Ribbentrop calculates.

Demarcation work still to be done.

4. The efforts for protecting forest reserves and plantations from fire were more successful than usual, 54,172 acres having been protected in the Pegu circle, at a cost of Rs. 7,538 compared with 39,552 acres, protected at a cost of Rs. 8,907 in 1878-79; while

Protection of reserves from fire.

in Tenasserim 42,241 acres were protected, at an outlay of Rs. 1,299, against 31,770 acres, at a cost of Rs. 968-9-0 in that year. This was, in a certain degree, attributable to the fact that the dry season of 1880 was about a month shorter than that of either of the three previous years, rain having fallen generally by the third week in April. All the teak plantations in the Pegu circle escaped injury; but fire broke out twice in the Choung-zouk reserve, burning down on the second occasion 400 acres, for which the Karen toungya-cutters were blamed; and 210 acres in the Nyan-leh reserve were burnt in consequence of carelessness and disobedience of orders. No explanation has been offered in the report as to the origin of the fire which occurred in the Magayee reserve; but it is understood that it was confined to a strip of *kine* grass between two fire-traces which the divisional officer intended to burn down, no injury being done to the reserve itself. Incendiaries are said to have caused the fire in the Dal-ee reserve, Tenasserim circle, while toungya-burning is blamed for that which occurred in the Sin-zweh reserve.

Toungya teak planting in reserves.

5. In accordance with the orders in paragraph 9 of the Government of India's review of the Forest Report for 1878-79, a new statement, numbered 46A., has been added to the tables appended to the report, showing the extent and cost to date of the toungya teak plantations which have been formed in specially demarcated areas within the boundaries of reserved forests. The area of these plantations (excluding fractions of acres), as it stood on 31st March 1880, was as follows:—

	Area on 31st March 1879.	Added in 1879-80.	Total area on 31st March 1880
	Acres.	Acres.	Acres.
Pegu	1,665	284	1,949
Tenasserim	529	36	565
Total ..	2,194	320	2,514

The cost of this work up to the end of 1878-79 was in Pegu Rs. 18,029-11-4 and in Tenasserim Rs. 3,467-2-7; while the outlay in 1879-80, both for the maintenance of previously existing areas and for the original cost and maintenance of the additions to them in that year, was in Pegu Rs. 2,209-7-5, or Rs. 1-6-3 an acre, and in Tenasserim Rs. 1,225-4-6, or Rs. 2-2-8 an acre. The toungya-cutters are paid by results (at the rate of one rupee for every hundred teak plants successfully raised); and the number of plants reared per acre differs greatly in different localities (*vide* paragraph 16 of the present report). So much success has hitherto attended this form of teak reproduction that, with proper precautions, and under clearly defined restrictions, it may well be encouraged and extended. Without departing from the spirit of the orders of the Government of India, "that toungyas "should, as a rule, be rigidly excluded from all Government demarcated reserves," there are many localities where toungya teak planting may as safely be allowed as in the case of the Kyoon choung reserve, where it was recently sanctioned,* the conditions with the Karens being that they are to be guided by the divisional

* Letter No. 280F., dated 12th May 1880, from the Home, Revenue, and Agricultural Secretary.

officer as to the spots in which they shall carry on their operations, and will do their utmost to protect the reserve from fire. The results actually attained in toungya clearings of the Tenasserim circle were comparatively trifling, owing to the early setting in of the rains. This was not, however, an unmixed evil. If less toungya teak planting was done, the defect was more than made up for by the diminished risk of fire in the reserves from the same cause. Fair success attended the "dibbling in" of teak seed in several of the Pegu reserves.

Kyet-pyoo-gan and Magayee teak plantations.

6. To afford greater protection to the Kyet-pyoo-gan plantation, proposals which had been for some time under consideration ended in the acquisition, soon after the year closed, of a strip of land to the south of the plantation, about 600 feet in breadth. Beyond this, the plantation was not extended in any way; but it has been divided into separate blocks, which arrangement will make protection from fire easier than before. The early rains prevented any extension of area in the Magayee plantation. A valuable work has, however, been accomplished in the laying down round its border a broad line of evergreen trees; and since the close of the year, a space of 108 acres which had been cleared has been burnt over, and teak seed is being laid down. A sketch-plan for the working of this plantation during the next five years was laid before the local Government in September 1879, and the papers were shown to the Inspector-General of Forests when recently in Burma. Mr. Brandis is of opinion that the plantation should not be extended, since it has been shown that teak can be reproduced more cheaply in toungya plantations and by other methods than by means of special plantations on a large scale. In this opinion the Chief Commissioner fully concurs; at the same time, the existing plantation will be maintained. The total cost of these two plantations during the year was Rs. 11,710.

Girdling teak.

7. Under the sanction of the Government of India, girdling operations, which for some years have been in abeyance, were resumed, and 930 trees in the reserved forests were girdled before the close of the year. The inspections made during the past year have shown that the reserves contain a large number of mature trees ready for girdling, and that there is a large and promising stock of young trees throughout the teak reserves. During the past year the reserves have yielded a moderate quantity of old and inferior teak timber. Little has been done in felling trees other than teak in reserves.

Unreserved Forests.

Work outside reserves.

8. The operations of the Forest Department in unreserved forests are restricted to preventing the felling of trees of the reserved kinds, raising revenue from the manufacture of cutch, granting trade permits for the extraction of timber of the reserved kinds, collecting dues on foreign timber at the Kado station on the Salween, and levying duties on forest produce floated down certain channels and canals in the Pegu division. Until the business of demarcating and administering the reserves is complete, no scheme for working and managing the unreserved forests can be matured. Meanwhile the needs of the country are satisfied with second-class timber, and the better kinds are reserved from felling save under permit. Comparatively few attempts were made to fell reserved timbers for trade purposes without permits, the requirements of the villagers near the forests being met by timber cut under free

permits. Until the new Forest Bill for British Burma becomes law, it will be impossible to raise any revenue on the bamboos, fire-wood, and petty timbers supplied from Government forests to the residents in the coast cities or the dwellers in the open rice plains; and similarly it is at present impossible to raise a revenue from the forests of Arakan, whence first rate timber for foreign markets is now being taken without duty. The scheme for making paper-stock from wild bamboos is being worked out by the agents of Mr. Routledge, the paper manufacturer; but as yet the trade has not been really started. The exhaustion of the cutch-yielding trees outside reserves will be a serious loss to the people and to the forest revenue; and the forest officers must, when pressure of other duty permits, turn their attention to the best way of securing the natural reproduction of cutch-producing forest.

Girdling teak.

9. The girdling of teak trees has been confined, as far as possible, to the unreserved forests, where 17,648 trees have been girdled during the year. These are said to be all trees of mature growth. The Conservators of both circles will be invited to consider whether a certain number of trees of other valuable kinds, such as thingan, pyingado, pyin-ma, and in-gyin, could not be profitably girdled and brought out of the forests to depôt at the same time as the teak. There is much demand for these timbers for local, household, and trade uses; and it will be economy gradually to bring to market mature trees of these kinds.

General and Financial.

Prosecutions for breach of forest laws.

10. The number of prosecutions for breach of forest rules is still comparatively small, and few of the cases appear to have been of a serious type: 204 persons were prosecuted in 89 cases; and conviction was obtained against 146 persons in 64 cases. These figures show that the forest laws and rules are not as yet irksome to the people. The account of these prosecutions, as given at paragraphs 30, 144, 164, 173, 237—239, prove that in the main punishments were not excessive. The forest officers rightly deem it undesirable to press for heavy sentences against the simple jungle people, who are now only beginning to learn our forest rules and system. Two serious cases of malpractices on the part of forest officials are reported, and it is presumed that the offenders were dismissed as well as punished.

Experimental cultivation of exotics.

11. In accordance with the wish of the Government of India, steps have been taken "to organize on a more systematic scale than "hitherto the attempts made to introduce foreign trees "into India, and to study the mode and rate of growth "of indigenous trees," by the selection of land for gardens or nurseries in suitable localities. In the Pegu circle, an area of some 10 to 12 acres at the new civil station of Tharawaddy has, after careful examination, been fixed upon. Major Seaton's efforts have been less successful, difficulty being found in meeting with a site answering to the required conditions; but it is hoped that, by-and-bye, a piece of suitable land may be secured by purchase near Moulmein. The greater majority of the Para India-rubber plants procured from Ceylon for cultivation at Mergui have died. Only 64 remained at the end of the year; but they were in a satisfactory condition, and varied from one to seven feet in height, the majority however being under five feet. It is proposed that future supplies of this plant be brought to Burma *viâ* Penang, except in the finest weather. Fair

Hevea brasiliensis (Para India-rubber tree).

success attended the cultivation of the other varieties of caoutchouc-yielding trees. The generally thriving condition of the garden at Mergui, where this cultivation is going on, has already been reported to the Government of India in letter No. 3539-94, dated the 15th November 1879. Arrangements are being made for extending the area suitable for the Para India-rubber plants. The plants of the *Ficus elastica* which have survived at Magayee have thriven very fairly; but sufficient details, such as the Government of India wish to receive regarding them, have not been given in paragraph 105 of the report, and the Conservator's attention will be again directed to the subject. The cultivation of the vanilla plant was also successful, although it has to be propagated by artificial fertilization, and needs more attention than can well be bestowed upon it.

Ficus elastica.

Vanilla.

There seems ground for hoping that the cultivation of mahogany in Burma will meet with success. A quantity of seed from Jamaica was supplied to each Conservator in July 1879, with directions by Dr. George King how it was to be sown. The result of the germination of the seed, some of which was bad, has already been reported to the Government of India. Conservators are considering, in consultation with Dr. King, what steps should be taken to ensure ultimate success.

Mahogany.

The expenditure on the cinchona plantation and other cognate experiments at Than-doung-gyee was again heavy; but the Conservator considers the condition of the cinchona plants to be more thriving than formerly. The Karen overseer gave trouble, and resigned in the middle of the working season, and for some months the plantation was looked after by a private resident in the locality who was acquainted with such cultivation. The plantation does not pay, and if, as Mr. Brandis has advocated, the Karens could be induced to grow cinchona for their own use, the cultivation of it by Government might be abandoned. But at present, although a large number of plants has been offered for public distribution free of cost, no applications have been received.

Cinchona.

It is as yet uncertain how the experimental cultivation of tea and coffee will turn out. The coffee plants, of which there are over 10,000, were attacked before the rains by a grub which killed many of them. The tea plants, of which there are about 1,300 or 1,400, also suffered in the same way, but to a less serious extent.

Tea and coffee at Than-doung-gyee.

12. The quantity of teak and other timber extracted from Government forests in British Burma by every form of agency during each of the past four years is as follows:—

Out turn of timber from British forests

Year.	Description of timber.	Logs	Pieces.	Sleepers	Tons
1876-77	Teak	52,834	..	44,493	46,431
1877-78	Teak	41,642	2,645	81	39,081
1878-79	Teak	25,295	3,755	..	22,763
1879-80	Teak	*a*22,254	*b*705	..	17,585
1876-77	Other sorts	2,157	1,282	..	2,608
1877-78	Other sorts	3,724	..	..	3,138
1878-79	Other sorts	2,826	978	6,864	2,219
1879-80	Other sorts	*c*2,736	*d*315	*e*8,147	1,698

a Pegu 11,598; Tenasserim 7,704; Kttarin and Pandaw forests 2,952; 22,454

b Pegu 402; 293; 55; Tenasserim 15; 705

c Pegu 510; Tenasserim 2,226; 2,736

d Pegu; Scantlings 315

e Tenasserim Hardwood sleepers

These figures display a continued falling-off in the out-turn of timber, a state of things which is likely to recur during the next two seasons, and until the timber which has just been girdled is in a condition to admit of its being floated. The figures shown as the out-turn in tons in 1878-79, and to which exception was taken in paragraph 14 of the Government of India's review of the forest report for that year, have been adhered to in the present statement. A separate explanation regarding them will be submitted. Of the timber of other sorts than teak, 378 tons in Pegu and 565 tons in Tenasserim were of the reserved species, as compared with 1,472 tons and 747 tons respectively in 1878-79, or a total decrease of 1,276 tons. It seems to the Chief Commissioner highly desirable that forest officers should consider how the use of the many excellent timbers other than teak, which the Government forests produce, can best be promoted.

Importations of foreign teak.

13. The decrease in the imports of timber from beyond the frontier is serious, being nearly double that of the decrease in 1878-79.

Route.	1877-78.	1878-79.	1879-80.	Decrease in 1879-80 compared with 1878-79.
	Logs	Logs.	Logs.	Decrease
By the Salween	113,846	125,433	111,537	13,896
,, Sittang	41,264	47,134	29,580	17,554
,, Irrawaddy	23,703	6,406	3,227	3,179
Total ..	2,11,813	1,78,973	1,11,341	34,629

The condition of each particular rainy season has of course a certain influence on the quantity of timber floated down; but these figures seem to demonstrate that the yield of the more accessible foreign forests is rapidly coming to an end.

Clearances of duty paid timber at Kado.

14. The Moulmein market was in a depressed state throughout 1878-79, and much less timber than usual was cleared on payment of duty from the Kado revenue station. The depression lasted during the first-half of 1879-80; but owing to a demand for teak in the ship-building yards at home, more activity began to show itself. The duty realized for the year was Rs. 2,84,554, and, of this, Rs. 2,32,693 was paid on foreign timber, as against Rs. 2,26,969 in 1878-79. The quality of the foreign timber cleared in 1879-80 must have been much superior to that removed in the previous year, as the number of logs was only 123,982, compared with 142,696 in 1878-79.

Exports of teak.

15. The dulness in the timber trade may be best illustrated by the fact that the exports of teak in 1879-80 were 23,647 tons from Rangoon and 97,415 tons from Moulmein, against 30,613 and 103,207 tons respectively in 1878-79, in which year moreover the total exports were 27,356 tons below those of 1877-78.

Financial results in 1879-80.

16. The receipts and expenditure of the year were as follows:—

Receipts.

	Rs.
I.—Timber and other produce brought to depôt by Government agency ..	7,10,397
II.— Ditto ditto removed from forests by lease-holders and purchasers	1,36,686
III.—Revenue from confiscated and drift timber	89,970
IV.—Revenue from duty on foreign timber at Kado	2,32,693
I.—Miscellaneous revenue, fines, &c., &c.	10,443
Total, omitting fractions ..	11,80,189

Disbursements.

	Rs.	
A.—Conservancy and works	5,29,692	
B.—Establishments	2,23,797	
		7,53,489
Net revenue ..		4,26,700

The receipts are better than those of the regular estimate by Rs. 1,60,189, and the disbursements are less by Rs. 82,511 than the figures of that estimate; while the actual net revenue is much better than was anticipated, and is slightly in excess of that realized in the year 1878-79. It must be borne in mind that the gross and net forest revenue of British Burma is now very far below what it used to be in former years, when the forest staff was very much smaller. The Conservators and their officers must always keep in view the obligation that lies upon us to restore to their former level the public revenues from these magnificent State properties, the forests of Burma.

17. As compared with that of 1878-79, the expenditure of the year was distributed as follows:—

		1878-79.	1879-80.	Increase.
		Rs.	Rs.	Rs.
Pegu	A.—Conservancy and working ..	3,48,914	3,76,625	27,711
	B.—Establishments	1,45,629	1,47,373	1,744
	Total ..	4,94,543	5,23,998	29,455
Tenasserim ..	A.	1,51,869	1,53,067	1,198
	B.	71,989	76,424	4,435
	Total ..	2,23,858	2,29,491	5,633
	Grand Total ..	7,18,401	7,53,489	35,088

One half of the net increase in Pegu under Head A. was caused by outlay on a bungalow for the Tharrawaddy officer, an office at Pegu, and other works. Of the balance, nearly Rs. 5,000 was spent on elephants and a little more than Rs. 6,000 on demarcation work and on plantations and on fire-protection of reserves in excess of the expenditure of 1878-79. The Tenasserim figures show a close adherence to the revised estimates submitted by Major Seaton in October 1879, while those of Pegu are much below Mr. Ribbentrop's estimates.

Forestry in Arakan.

18. Preliminary steps have been taken towards placing the forests of Arakan under the direct control of Government. The Conservator of the Tenasserim circle was deputed to make preliminary enquiries, to ascertain what species of trees should be declared reserved, and at what points timber revenue stations should be established, in consultation with the Commissioner of the division. The subject was also discussed with the Inspector-General of Forests; and recently an Assistant Conservator of Forests has been appointed to the Arakan division. It is very desirable, in the interests of forest administration in Arakan, that the proposed Forest Act for Burma come into force soon.

Administrative organization.

19. The subject of administrative organization, to which attention was directed in paragraph 6 of the review of the last forest report, has met with careful consideration, and the Chief Commissioner has had the benefit of Mr. Braudis's opinion and advice upon

it. No time will be lost in applying the general principle advocated by the Government of India as to the position which forest and district officers should hold in relation to each other, and it is hoped that the necessary details, upon which Commissioners have been asked to report, will shortly be arranged. A statement of forest ranges and beats, so far as they have been organized, will be found on pages 11 and 12 of the present report.

Health of forest staff.

20. Beyond a good deal of fever and one death from sunstroke in Tenasserim, the general health of the department was satisfactory throughout the year. Exposure in the forests contributed to cause the illness of Mr. A. O. Brown, of the Civil Service. By Mr. Brown's death the Government have lost an able and zealous officer, who had done good service to the people and to the State during some years of duty on forest demarcations. Mr. Bingham had a narrow escape from drowning in attempting to swim across the Mepalay stream when it was in full flood. He owed his escape to the brave efforts of a Karen, who rescued him at the greatest personal risk.

21. Forest legislation occupied a considerable share of attention during the year. A preliminary draft Forest Bill was received from the Government of India, which was circulated to civil and forest officers. A full expression of opinion was obtained upon the provisions of the Bill, which was also revised by the Inspector-General of Forests in consultation with Conservators. Finally, the Bill was thoroughly discussed by a special committee presided over by the Chief Commissioner, and was submitted in its amended form to the Government of India. If the measure be passed into law, it is likely to introduce into forest administration a precision and definiteness which are at present somewhat lacking, and generally to be of much benefit both to the people and to the officers concerned in the administration of the law.

22. The officers of the Forest Department have manifested satisfactory energy and ability in the performance of their duty, and the Chief Commissioner is much indebted to Major Seaton and Mr. Ribbentrop for the valuable advice and assistance which they have given.

By order of the Chief Commissioner,

G. D. BURGESS,

Offg. Secretary.

REPORT

ON

THE FOREST ADMINISTRATION

OF

BRITISH BURMA

For the year 1879-80.

BY

Major W. J. SEATON, Conservator of Forests.

SECTION I.—SUMMARY.

1.—Area and Boundaries.

During the year the local Government sanctioned the final demarcation of an area of 126 square miles in the Prome division and 67 square miles in the Sittang division, or a total area in the Pegu circle of 193 square miles.

Increase in area of State reserves in Pegu circle.

2. In the Tenasserim circle, an area of nine square miles was added to the State reserves in the Attaran division.

Increase in area of State reserves in Tenasserim circle.

3. By the addition of 193 square miles in the Pegu circle and nine square miles in the Tenasserim circle, the area of State reserves has been increased to 1,182 square miles in the former and 260 square miles in the latter, thereby making a total of 1,442 square miles of State reserves in the province, exclusive of areas burdened with toungya rights.

Total increase in area of State reserves in the province.

4. Of the newly sanctioned area in the Pegu circle, 125 square miles represent the old *ordinary* reserve known as the "Tha-yet-myo East Yoma block reserve," the demarcation of which was sanctioned in February 1874.

Newly sanctioned State reserves in Pegu circle.

5. The boundaries of all the newly sanctioned State reserves were finally demarcated in accordance with the procedure laid down in Rule XIV. of the forest rules.

Final demarcation of boundaries.

6. In the Pegu circle, proposals have been submitted for the reservation of the following areas after examination by the Civil Officers specially deputed by the local Government :—

Proposals for reservation in Pegu circle.

Prome division.

	Square miles.
East of Irrawaddy (exclusive of 43 square miles subject to rights of toungya cultivation)	.. 105
West of Irrawaddy	.. 276
Or a total of	.. 381

The area noted as east of the Irrawaddy comprises the areas on the Nawin choung originally selected as ordinary reserves.

Proposals were also submitted for the reservation of an area of 93 square miles in the Rangoon division. It was sanctioned after the close of the official year, as well as the Oke-kan reserve of 125 square miles.

Areas examined and about to be proposed for reservation in Pegu circle.

7. At the close of the year proposals were in course of submission for the reservation of about 300 square miles in the Sittang division, which had been examined during the year by a Civil Officer and Forest Officer.

Preliminary examination and selection of reserves in Pegu circle.

8. The preliminary examination of areas suitable for reservation resulted in the selection of 150 square miles in the Pegu forests of the Rangoon division and of six reserves in the Sittang division, with the general approval of the District Officer.

Proposals for reservation in Tenasserim circle.

9. Proposals have been submitted for the reservation in the East Salween division of five tracts, aggregating 128 square miles, which were examined and approved of by a specially deputed Civil Officer during the year.

Preliminary examination and selection of reserves in Tenasserim circle.

10. The Upper Thoung-yin and Upper Salween forests were examined, and proposals will be submitted for the demarcation of 150 square miles in the former and 30 square miles in the latter.

Expenditure in preliminary demarcation.

11. The cost of preliminary demarcation during the year was Rs. 8,831-11-5 in the Pegu circle and Rs. 3,771-8-0 in the Tenasserim circle, or a total of Rs. 12,603-3-5. The higher expenditure in the former is explained by the fact that two demarcation parties were employed in that circle, and the department was debited with the pay and allowances of the Civil Officers.

2.—Protection and Improvement.

Fire-protection in Pegu circle.

12. With the exception of partial failures, aggregating a total of 1,295 acres in the Choung-zouk reserve, Prome division, Nyan-leh Moke-ka Beeling and Boben reserves, Tharrawaddy division, and Magayee reserve, Rangoon division, fire-protection proved successful throughout the Pegu circle, all the other reserves and plantations, including Kyet-pyoo-gan, having been satisfactorily protected.

Out of a total area of 55,467 acres, there were in all 54,172 acres successfully protected, or an increase of 14,620 acres over and above the area protected during the previous year.

Cost of fire-tracing in Pegu circle.

13. The expenditure incurred was Rs. 7,538.

Fire-protection in Tenasserim circle.

14. In the Tenasserim circle the work of fire-protection was successful, except in the case of the Da-lee reserve, the fire-traced portion of which, 799 acres in extent, was burnt towards the close of the season when maliciously set on fire by parties at present unknown. Of the Sin-zweh reserve, a small portion, 100 acres, was also reported as burnt.

The total area successfully protected exhibits, however, a large increase over and above the total area protected during the previous year, operations having been extended to the Kyoon choung reserve in the Attaran district.

Out of a total area of 43,170 acres taken in hand, 42,241 acres were successfully protected, or an increase of 10,471 acres over and above the area protected during the previous year.

Cost of fire-tracing, Tenasserim circle.

15. The total expenditure, which includes cost of some additional permanent fire-traces in Sin-zweh reserve, amounted to Rs. 1,298-13-6.

16. The cultivation of teak under the toungya system was very successful in the Pegu circle during the past year: 284·85 acres were stocked with teak plants at a cost of Rs. 7-12-1 per acre, the countings showing 655 to 1,200 plants per acre in the Tharrawaddy division and 291 plants per acre in the Prome division.

Cultivation of teak in reserves under the toungya system in Pegu and Tenasserim circles.

Experiments were also undertaken in the Tharrawaddy division on a small scale to test the practicability of raising *Shorea sterculia* and wild mango as an associate to the teak. In the Tenasserim circle, owing to the early and heavy rain in April preventing a thorough burn of the toungyas, very indifferent results were obtained, except in the case of 13½ acres in the Ka-hee-loo reserve and 22 acres in the Meh-waing reserve, in which the countings gave an average of 220 plants per acre in the former and of 191 plants in the latter. The total area cultivated was 392 acres; but precise results not having been ascertained in the Sin-zweh reserve before the hot season, when it is difficult to distinguish the young plants, payment has been deferred, and the area cultivated in this reserve, 356 acres, has been excluded from the area statement appended to the report. The area actually planted and paid for during the year is, in consequence of this reduction, only 36 acres. In the Ka-hee-loo reserve experiments were also made with thitka *(Pentace burmanica)* seed, and 80 plants were successfully raised.

The total expenditure, embracing cost of planting, weeding, and taxes under this head, was Rs. 2,209-7-5 in the Pegu circle and Rs. 1,225-4-6 in the Tenasserim circle.

17. There has been no extension of the Magayee plantation consequent on the early rains preventing the burning of the new clearings,—108 acres in extent. To insure protection against fire by means of evergreen trees, a broad belt 100 feet wide, comprising an area of 41½ acres, was successfully planted up along the west boundary with seedlings of evergreen varieties.

Regular teak plantations in Pegu circle.

18. As noted in paragraph 19 of previous year's report, regular teak plantations in this circle are limited to small experimental plantations at Thingan-nyee-noung in the Attaran division, and at Shway-goon and Ko-lone island on the Salween river, which it has never been deemed advisable to extend.

Regular teak plantations in Tenasserim circle.

19. The dibbling in of teak seed in the Choung-zouk reserve, Prome division, which was at first deemed a failure, and noted as such in paragraph 20 of previous year's report, has proved a complete success. The work was continued by dibbling in 170 baskets of teak seed in suitable places, and weeding and clearing overhead the areas prooviously sown wherever this was deemed necessary. In the Tharrawaddy division, 97 baskets of teak seed were also dibbled in the Bwet reserve, and 94 baskets in the Kan-gyee reserve with good results; 48 baskets were also similarly expended in the Nyan-leh reserve. The work of freeing suppressed teak saplings and cutting creepers was also carried on wherever the services of the subordinate forest establishment were available for supervision. In the Tenasserim circle, owing to difficulty of procuring labour, the work was limited to weeding the lines 20 feet wide, sown with teak seed in the Sin-zweh reserve. The success of this experiment moreover continues doubtful, the plants making very little headway compared with those raised in the toungya plantations.

Artificial aid to reproduction of teak in Pegu circle.

20. In the Pegu circle, the *Ficus elastica* trees in Magayee plantation number 106, several having died from the effects of shade overhead. Of those standing in open ground, the average girth is six inches and average height 10½ feet, the largest being 20 feet high and one foot in girth. Thirty-six mahogany plants were set out in the Magayee plantation and are doing well, although in indifferent soil; and 24 mahogany seedlings were raised in the Tharrawaddy division.

Experimental cultivation of exotic and other trees in Pegu circle.

The vanilla plants continue to thrive, and have commenced to flower.

Seeds of some Australian varieties, chiefly *eucalypti*, have been sown, and an experiment on a small scale has been made with *bryophyllum* on the fire-traces at Magayee.

An experiment on a small scale has been commenced to plant up the more exposed portions of the Pyoon choung and Yay-nay reserve boundaries in Sittang division with evergreen varieties.

Experiments made in the Pyoon choung reserve with the *Pithicolobium saman* show that the plants do not grow as rapidly there as elsewhere in Burma.

In the Than-doung-gyee plantation, Sittang division, 90,000 cinchona seedlings have been raised and are being offered gratis to the public, a few only being retained to fill up blanks. The costly practice of keeping the entire surface of the ground free from all overgrowth has been discontinued, and, as a consequence of this, the plantation has a much more satisfactory appearance.

Experiments were continued at Than-doung-gyee, and also at the Pyoon choung reserve, with tea and coffee seed, and gave very fair results at the former.

Experimental cultivation of exotic and other trees in Tenasserim circle.

21. At Mergui, the eight India-rubber plants of *Hevea braziliensis* in the forest office compound continue to thrive, and vary from 8½ to 30 feet in height.

Of the 178 *Hevea braziliensis* plants which survived the voyage from Ceylon 64 only remain, these being the strong, healthy plants, the weaker ones having all died off. They vary from about one foot to seven feet in height.

The two *Castilloa elastica* plants are doing well, and are respectively three and four feet in height.

From ceara *(Manihot glaziovii)* seed 651 plants have been raised, and of these 241 have been set out in the plantation. Their growth is very rapid, the oldest, which are 11 months, being from eight to 14 feet in height.

The two vanilla plants continue to do well; but one of the cocoa plants has succumbed to the hot weather.

From mahogany seed received from Calcutta, 250 plants were raised at Moulmein; and of the strongest plants, 200 in number, about 100 will be put out in the Mergui plantation and the remainder near Amherst.

Breaches of forest rules in Pegu circle.

22. In the Pegu circle four men were prosecuted for unauthorized cutting of toungyas in the Minboo Boben reserve, and 11 men for illicit felling of cutch trees in the Thit-cho reserve, Tharrawaddy division.

One case also occurred of illicit felling in the Thit-pyat reserve, Rangoon division.

Breaches of forest rules in Tenasserim circle.

23. In the Tenasserim circle, prosecution was instituted against five men for unauthorized cutting of toungya in the Wa-moo reserve, West Salween division; but the parties proved that the late forester had given them permission on the condition of planting teak, and were discharged.

Communications and other works in Pegu circle.

24. In the Kan-gyee reserve, a cart-road has been straightened and cleared of trees.

In the Tone-thay and Tha-yet choungs in the Boben reserve, some rocky obstructions were removed by blasting.

In the Magayee plantation, to facilitate supervision and fire-protection, the 1876 and 1877 plantations, aggregating 595 acres, were divided into six blocks by the formation of three inspection rides,—in all 13,000 feet in length.

The Kyet-pyoo-gan plantation was, for similar reasons, divided into three compartments by inspection rides, aggregating 8,477 feet in length.

The Magayee road to Dee-doo kwin was also completed during the year, with the exception of two culverts.

3.—Yield and Working.

Girdling.

25. In the Pegu circle, 257 teak trees were girdled in the Wa-pyoo reserve, and 673 teak trees in the Mee-do reserve, Prome division.

Cost of girdling in reserve.

26. The expenditure incurred was Rs. 186.

4.—Unreserved forests.

Area and boundaries.

27. No alteration has to be recorded in the area of the unreserved forests, except the reduction of 202 square miles caused by the demarcation as State forests of 193 square miles in the Pegu circle and nine square miles in the Tenasserim circle.

Requirements of the population.

28. The free permit system has continued in force, and such returns as have been received from the District Civil Officers make it very evident that the consumption of reserved woods other than teak, thitka, thitkado, kanyin, and padouk has greatly increased.

The reports from the A-waing, Ileh-goo, and Taw-la-teh revenue stations, which command the three main approaches into Rangoon and its suburbs, also exhibit a great increase in the extraction of unreserved woods brought out for trade purposes, but subject to no royalty.

Leased forests.

29. As recorded in previous year's report, the only leased forests are those which are held under 30-year permits in the Attaran and Pan-daw forests, which lapse in 1896.

Breaches of forest rules in Pegu circle.

30. In the Pegu circle, prosecutions were instituted in five cases of unauthorized felling of teak, and in one case of cutting toungya in a teak locality. Convictions were obtained in every case but one, and 12 individuals were fined. Twelve other cases connected with teak timber were instituted, and the defendants, 17 in number, punished by fines or confiscation of timber.

Prosecutions were also successfully instituted in four cases connected with reserved woods other than teak and in four cases of breach of catch-boiling rules, 52 of the defendants being punished with fines or imprisonment.

In two similar cases the prosecution failed.

Five cases were also dealt with under the Indian Penal Code.

Breaches of forest rules in Tenasserim circle.

31. Five cases of felling and girdling teak timber and one case of defacing foreign teak timber were discovered. In four cases prosecutions were instituted and convictions obtained. In one case the defendants absconded, and the remaining case, a somewhat serious one, of girdling 316 teak trees in the Lower Thoung-yin forests was pending at the close of the year.

Forty-three cases of breaches of Kado rules, and connected with timber in transit, were also dealt with during the year.

Communications and buildings in Pegu and Tenasserim circles.

32. In the Pegu circle, a 1st class bungalow was completed at the Tharrawaddy head-quarters, and rest-houses were erected at Zee-byoo-bin, Yay-nay reserve, and Tha-bet-kweh, in the Bone-doung reserve.

The rest-houses at Magayee, Taw-la-teh, A-waing, and Zoung-doo were repaired, and small depôt-houses erected at Myit-kyo and Ma-douk.

5.—Yield and working.

Girdling operations in Pegu and Tenasserim circles.

33. Girdling operations were resumed during the year, and 17,648 1st class teak trees were girdled in the Pegu circle and 605 1st class teak trees in the Tenasserim circle, inclusive of 316 trees reported as inadvertently girdled without authority in the Lower Thoung-yin forests. In the latter circle the work made such slow progress in the Upper Salween forests, owing to the timber standing in almost inaccessible and very rocky localities, that it was deemed advisable to discontinue it and employ the establishment in the more important work of selecting areas for protection against toungya cultivation.

As the work in the Pegu circle had not been brought to a close on 31st March, the details of it can only be exhibited in next year's administration report.

Yield of forests in Pegu and Tenasserim circles.

34. The following was the total quantity of timber extracted from the forests, the bulk of which was received at the central depôt, 2,103 logs being neaped timber :—

	Logs and pieces.	Tons.
Pegu circle, teak	11,598	10,668
Tenasserim, do.	7,719	5,350
Total of teak timber ..	19,317	16,018
Pegu circle, other woods	825	378
Tenasserim, do.	2,226	756
Ditto, sleepers of other woods	8,147	564
Total of other woods ..	11,198	1,698
GRAND TOTAL OF TEAK AND OTHER WOODS EXTRACTED BY GOVERNMENT AGENCY ..	30,515	17,716

Teak extracted by purchasers added to out-turn of Pegu circle.

35. To the out-turn of the Pegu circle has to be added 690 logs, or 222 tons, teak timber, worked out by purchasers or disposed of locally in or near the forests.

Teak timber from leased forests in Tenasserim circle.

36. During the year, the lease-holders of the Attaran and Pan-daw forests extracted 2,952 logs of teak timber, containing 1,345 tons.

Total out-turn of teak from forests in Pegu and Tenasserim circles.

37. The total out-turn of teak from all sources was—

	Tons.
Pegu circle	10,890
Tenasserim circle	6,695
Total ..	17,585

Timber of reserved kinds other than teak extracted under trade permits.

38. During the year trade permits were issued for 29,812 trees of reserved kinds other than teak, thitka, thitkado, padouk, and kanyin in the Pegu circle and for 5,226 trees in the Tenasserim circle, making a total of 35,338 trees.

Free permits for timber of reserved kinds.

39. Free permits were also issued for 86,451 trees in the Pegu circle and for 5,226 trees in the Tenasserim circle.

Timber neaped in transit, Pegu circle.

40. During the year, only 253 logs were reported as neaped in transit to the central depôt at Rangoon.

Cost of extraction of timber

41. In the Pegu circle, the total expenditure charged to extraction was Rs. 2,51,308-7-6 and in the Tenasserim circle Rs. 1,08,622-2-9, the rates per ton being as follows :—

	Teak.			Other woods.		
	Rs.	A.	P.	Rs.	A.	P
Pegu	17	15	0	10	4	0
Tenasserim	13	11	7	11	8	5

Drift timber operations in Pegu and Tenasserim circles.

42. During the year, 8,904 logs of drift timber were salved departmentally in the Pegu circle and 4,598 logs and pieces in the Tenasserim circle, making a total of altogether 13,502 logs collected and brought to depôts. These figures, compared with those of 1878-79, exhibit a decrease in both the Pegu and Tenasserim circle collections of 2,627 logs and 2,220 logs respectively.

In the Pegu circle, 7,264 logs were made over to claimants, and 456 logs broke adrift during the high floods in the Sittang river. Of the collections in the Tenasserim circle, 1,772 logs were restored to claimants and 3,510 sold.

43. The receipts of the central depôt amount to 20,186 logs of teak, measuring 18,344 tons, and 637 logs of other kinds, measuring 530 tons, whereas during the previous year the receipts were 12,240 tons of teak and 985 of other kinds. The increase, as compared with previous year, is owing to the large balance (over 9,000 logs) of timber accumulated in the Myit-ma-ka river, which was all floated to the central depôt in 1879-80.

Arrivals at central depôt, Rangoon.

44. The disposals of the central depôt amounted to 16,653 logs and sleepers of teak, measuring 15,630 tons, and 776 logs of other kinds and 25 sleepers and 315 scantlings, measuring 635 tons, leaving a balance of 12,422 tons of teak and 26 tons of other woods, or 2,796 tons in excess of last year's balance.

Disposals at Rangoon Central Depôt.

The total amount of timber sold by direct Government agency in the Pegu circle amounts to 17,034 tons of teak and 1,302 tons of other woods during 1879-80, against 13,982 tons of teak and 1,584 tons of other woods during 1878-79.

45. In the Tenasserim circle, 9,582 tons of teak and 1,376 tons of timber of other kinds were sold by the department, whereas during the previous year the quantities sold of teak and other woods were 9,126 tons and 213 tons respectively.

Disposals of timber in Tenasserim circle.

Average prices realized.

46. The average prices realized per ton in the central depôt at Rangoon during the year were—

	Rs.	A.	P.
Mast pieces	100	4	2
Yard do.	36	7	4
Doogies 1	46	5	8
Do. 2	22	14	8
Loozars	31	12	4
Yatthits	42	3	0
1st class timber	59	6	0
2nd ,, do.	24	1	0

For timber of other kinds in the Pegu circle the following prices were realized per ton :—

	Rs.	A.	P.
Thitka	20	14	0
Padouk	....		
In	5	4	0
Kanyin	22	0	5
Pyingado	14	0	0

In the Tenasserim circle, the average prices realized on the sales of the year were Rs. 22-13-1 per ton for teak timber and Rs. 30-15-7 per ton for timber of other kinds.

The rate realized on hard wood sleepers was Rs. 57-1-8 per ton.

47. Three hundred and nineteen logs of teak and 18 of padouk were prepared and shipped for the gun carriage factory at Madras at a cost of Rs. 22,694-4-2, including transport and delivery; while 200 logs of padouk were supplied to the carriage gun factory at Bombay at a cost of Rs. 10,056-15-2.

Conversion of timber in Tenasserim circle.

48. Shipments were confined to 3,140 sleepers from Moulmein and 4,880 sleepers from Tavoy and Mergui, which were all shipped to Calcutta at a cost of Rs. 15,236-6-2.

Shipments of timber.

Yield of the Forests beyond the Frontier.

49. The total quantity of foreign timber reported at the Kado revenue-station during the year amounted to 111,540 logs, or 90,248 tons, of teak timber, which, compared with the previous year's arrivals, exhibit a decrease of 13,893 logs, or 28,966 tons, in the out-turn of the foreign forests.

Import of foreign timber by the Salween river.

50. The number of logs cleared on payment of duty (seven per cent. *ad valorem*) was 1,23,982; and balance on hand at the close of the official year was 66,907 logs.

Timber cleared on payment of duty.

4.—Financial Results.

Receipts and expenditure

51. The receipts and expenditure of the year, as exhibited in form 49, were as follows:—

		Rs.
Pegu circle ..	Receipts	6,52,069
	Expenditure	5,23,998
	Showing a surplus of ..	1,28,071
Tenasserim circle ..	Receipts	5,28,120
	Expenditure	2,29,491
	Exhibiting a surplus of ..	2,98,629

thereby making a total net revenue of Rs. 4,26,700.

During the previous year in the Pegu Circle—

	Rs.
The receipts amounted to	6,55,517
The expenditure to	4,94,542
Leaving a balance of ..	1,60,975
The figures show a falling off in gross revenue of	3,448
In net revenue of	32,904

Review of receipts, Pegu circle.

52. Revenue I*a*. exhibits an increase of Rs. 4,535 as compared with the previous year. Although the timber sold was less by 3,353 logs, the cubic contents were in excess of the quantity sold in 1878-79. Prices, on the whole, were unsatisfactory throughout the year. Revenue I*e*. shows a falling-off of Rs. 75.

Revenue II*a*. shows a decrease of Rs. 2,901, due chiefly to the smaller extraction of refuse timber by the Public Works Department, and a slight falling-off in quantity of timber other than teak extracted under trade permits. Revenue II*b*., *c*., *d*., and *e*. show an increase respectively of Rs. 864, Rs. 609, Rs. 23, and Rs. 32,995, being due to increased extraction of firewood and manufacture of charcoal, increased sale of bamboos in the Tharrawaddy division, and sale of grass in the same division; while minor forest produce shows a large increase in the Prome and Tharrawaddy divisions, due to the enhanced price per cauldron of cutch levied last year. Revenue III. shows a decrease of Rs. 7,016, due to a falling off in collections of drift timber in the Rangoon Agency, Tharrawaddy, Prome, and Sittang divisions; while the Western and Shway-gyin divisions show an increase. The chief falling off was in the Sittang division, amounting to Rs. 8,610. Revenue V*a*. and *b*. show an increase of Rs. 324 and Rs. 820 respectively; while *c*. shows a decrease of Rs. 33,626, which, as noted in last year's report, was due to credit being taken under the orders of the Comptroller-General for value of elephants loaned to contractors, being a matter of account and not of revenue.

Review of expenditure, Pegu circle.

53. Expenditure *A*.I*a*. shows an increase of Rs. 5,529, and is due to the large out-turn from the Tharrawaddy division consisting of last year's neaped timber in addition to the out-turn of the year; while there has been an increase in charges of Rs. 28,700 in Tharrawaddy, Rs. 1,911 in Rangoon, and Rs. 20,607 in Toungoo; there has been a decrease of Rs. 34,942 in Prome, Rs. 2,874 in Agency, Rs. 8,028 in the Western, and Rs. 91 in the Shway-gyin division, showing, on the whole, an increased charge of Rs. 5,529 for this circle.

A.I*b*. shows a slight increase of Rs. 19-8-0 and *c*. a decrease of Rs. 210, no bamboos having been cut for Mr. Routledge's experiments.

A.II. exhibits an increase of Rs. 805, due chiefly to cost of establishment entertained in the Western division in the revenue stations of Myan-oung and Yandoon.

A.III., which shows a decrease of Rs. 4,964, is due entirely to restricted salvage operations in the Sittang river, the quantity of foreign drift timber being less by several thousand logs.

A.VI*a*. exhibits an increase of Rs. 4,705, owing to larger purchases of elephants, to fill up casualties of the year, and to provide for the wants of the Civil Officers attached to the Demarcation Staff on the Sittang division, and the

Forest Officer deputed to carry on girdling operations in the Kyouk-masin forest.

*A.*VI*b.* and *c.* show a slight increase of Rs. 819 and Rs. 219 respectively, and call for no remark.

*A.*VII*a.* exhibits an increase of Rs. 783, due to cost of roads in the Rangoon division leading from the Magayee plantation and the railway line to Kinpadee.

*A.*VII*b.* exhibits an increase of Rs. 14,827, due chiefly to the construction of a 1st class bungalow for the Tharrawaddy division; also an office at Pegu in the Rangoon division, a rest-house in the Sittang division, and re-shingling the Prome Forest Office.

*A.*VII*c.* exhibits a decrease of Rs. 1,001, being savings under estimate in the Rangoon, Prome, Sittang, Shway-gyin, and Western divisions.

*A.*VIII*a.* and *d.* to *f.* show an increase of Rs. 6,179; while, under *b.* and *c.*, a saving of Rs. 125 and Rs. 88 respectively is shown. The increase is chiefly under (*d.*) plantations and (*e.*) fire-protection in the Tharrawaddy and Rangoon divisions.

*A.*IX*a.* shows a decrease of Rs. 658, *b.* an increase of Rs. 148 owing to legal expenses incurred in the Shway-gyin division, and a decrease of Rs. 276 under *c.*

Under B., "Establishments," there is an increase of Rs. 1,814 under "Superior officers" and of Rs. 12 under *d.*, "Office establishment"; while under *a.*, *c.*, and *e.*, there is a decrease of Rs. 734,737 and 166 respectively.

Under *B.*II., "Travelling allowances," there is, on the whole, an increase of Rs. 1,909, chiefly under *b.*, "Superior officers," field operations having commenced early and continued throughout the season.

*B.*III., "Contingencies," exhibit a decrease of Rs. 353, chiefly under *f.*, "Sundries."

TENASSERIM CIRCLE.

Review of receipts in Tenasserim circle.

54. The total receipts of this circle amounted to Rs. 5,28,120-9-4, or Rs. 46,075-12-2 in excess of the previous year and Rs. 1,21,120 in excess of the budget estimate of the year. This is attributable chiefly to the improved state of the market for 2nd class teak timber. The increase may be thus shown:—

	Rs.
I*a.*—Timber	7,632
II*a.*—	4,389
c.—	741
III.—Drift, confiscated, and waif	28,287
IV*a.*—Duty on foreign timber	6,423
V*b.*—Refunds	56
Total ..	47,528

while the following heads of revenue show a slight falling off:—

	Rs.	Rs.
I*b.*—Firewood and charcoal ..	.. ..	223
V.—Miscellaneous—		
a.	484	
c.	746 ..	.. 1,230

Review of expenditure in Tenasserim circle.

55. The entire expenditure under A., "Conservancy and works," amounts to Rs. 1,53,067, or Rs. 3,067 in excess of the regular estimate. The increase, as compared with the previous year, is shown under the following heads:—

	Rs.
*A.*I*a.*—Timber	8,427
VI*c.*—Stores, tools, and plant	465
VII*a.*—Roads and bridges	47
c.—Other works..	128
VIII*b.*—Compensation for land and rights	55
c.—Surveys and working plans	352
f.—Other works..	3,058
IX*b.*—Law charges..	20
c.—Other do.	413
Total ..	12,965

This increase calls for no remark, except, in the case of VIII*f.*, Rs. 3,058. Under this head, in addition to girdling and elephant charges in connection with

demarcation, had to be entered the Ka-moo cooly establishment employed partly in plantation and partly in fire-tracing work, the information supplied at the time not admitting of a proper sub-division of the expenditure under those respective heads. In like manner, a decrease is exhibited under the following heads of account:—

	Rs.
II.—Timber and other produce removed, &c. ..	5
III —Drift, confiscated, and waif	482
VI*a*.—Purchase of cattle	6,375
,, *b* —Feed and keep of cattle	1,023
VII*b* —Buildings	1,358
VIII*a*, *d*, & *e*.	2,518
IX*a*.	25
Total ..	11,766

(*b*) *Establishments.*—There has been an increase under "Superior officers" of Rs. 959 and Rs. 1,174 under "Office establishments," and a decrease of Rs. 151 under *c.*, "Depôt" and "Subordinate establishments."

B II., "Travelling allowances," exhibits an increase of Rs. 579 under *a.*, Rs. 2,596 under *b.*, and Rs. 15 under *d.*

B III., "Contingencies".—On the whole, there is a decrease of Rs. 597, chiefly under "Sundries."

GENERAL REMARKS.

Changes in the controlling establishment.

56. Towards the middle of May 1879, Mr. Ribbentrop, Conservator of Forests, Pegu circle, proceeded to Europe on three months' privilege leave, and was, about the close of that period, deputed by the India Office to confer with Mr. Routledge in England regarding the preparation of paper from bamboo stems. Proposals have been since submitted to, and approved of by, the Chief Commissioner as to the facilities which should be offered to encourage this enterprise.

During Mr. Ribbentrop's absence, Major Seaton held charge of the Pegu circle, in addition to the charge of the Tenasserim circle, from the 1st July to the 10th September 1879. Prior to 30th June, the charge of the Pegu circle devolved on Mr. Whittall, Officiating Deputy Conservator of Forests, 2nd grade.

Mr. C. W. Palmer, Assistant Conservator of Forests, proceeded, during the year under review, on six months' leave on private affairs, returning on the 11th November 1879.

Mr. J. Nisbet, Assistant Conservator of Forests, held charge of the Western division during Mr. Palmer's absence.

Mr. J. N. Pickard, Assistant Conservator of Forests, appointed by the Secretary of State, arrived in Rangoon on the 30th December 1879, and was posted to the North Tharrawaddy sub-division. Towards the beginning of March last, this officer was deputed to examine and make a valuation of the resources of the Great Cocos island.

Mr. M. H. Ferrars, Deputy Conservator of Forests, and at present officiating as Inspector of Schools in British Burma, was re-transferred to this department by Government of India notification No. 99 F. of the 13th February last; but, as subsequently ordered, the transfer will not take effect till November next.

Changes in the subordinate executive establishment.

57. Forest Apprentice Moung Shway Gone having finished his course of instruction, under the Superintendent of Forest Surveys at Dehra Dun, was appointed a Probationer on the superior staff of the forest service in November 1879 and posted to the Sittang division.

In the Tenasserim circle, the death has to be recorded of Myat Koung, a very promising Karen Forest Apprentice, after a few months' employment in the Attaran forests. While engaged in examining the boundaries of the Ma-oo reserve, he was prostrated by sun-stroke and died on the 26th September.

In the Tenasserim circle, discharged Forest Ranger Shway Oung was re-appointed on probation, his health having improved.

In the Pegu circle, officiating Forest Ranger Moung Shway Douk, in the Sittang division, and Forest Ranger Alli Moodeen, in the Western division, were dismissed for fraudulent conduct; and Mr. P. D'Cruze, Clerk and Accountant in the Divisional Office, Rangoon, was also dismissed for falsifying records.

Health of superior and subordinate establishments.

58. The health of the officers attached to the Pegu circle was maintained fairly well on the whole; but in the Tenasserim circle fever was somewhat prevalent: Mr. Ward was laid up for some time at Pa-poon with fever; and Forest Ranger Shway Yay had to be removed in a dangerous state from the Sin-zweh reserve on account of fever. He only recovered after an absence of three months.

The forest peons employed in the Thoung-yin and Upper Salween districts suffered much from the same cause, and four cases terminated fatally.

Conservator's tours, Pegu circle.

59. During the greater part of April 1879, Mr. Ribbentrop was inspecting the forests in the Sittang and Shway-gyin divisions. In October, after his return from privilege leave, he visited Prome and Thone-zeh. In November and part of December he proceeded on a tour through the Rangoon division, traversing the Hlaing Yoma reserve to the north of the Kyet-pyoo-gan plantation. In the latter part of December, he visited some of the principal centres of reproductive operations in the Tharrawaddy division, returning to Rangoon on the 31st of the same month.

After arranging preliminaries, the Conservator accompanied Dr. Brandis through his tour of inspection into the several forests of the Pegu circle, which extended from the 7th January to the 20th February 1880. The Conservator then proceeded to examine the forests in the Sittang division, returning to Rangoon by the 31st March.

Tours of Conservator of Forests, Tenasserim circle.

60. The Conservator visited Tavoy and Mergui in April, and was on duty at Rangoon from the 30th June to the 16th July and from the 30th July to the 14th August. The Conservator visited Akyab and Kyouk-pyoo in the latter part of August, having been deputed to confer with the Commissioner of Arakan with reference to the introduction of forest conservancy into that province, and returned to Moulmein on the 14th September.

In November the Conservator visited Mergui and Tavoy, and subsequently visited the obstructions on the Toung-byouk stream, a large feeder of the Tavoy river, and returned by the 23rd to Moulmein.

The Conservator proceeded on 13th December *viâ* Kaw-ka-rake and Mya-wa-dee to the Middle Thoung-yin forests, and thence to the Meh-gala forests and Upper Thoung-yin forests, in connection with forest demarcation and selection of areas for reservation.

Traversing thence the entire length of the Middle Thoung-yin district, the Conservator examined the tracts east of the Meh-pleh range, and, returning through the Meh-paleh district, recrossed the Daw-na range at the sources of the Naboo stream, and returned to Moulmein by the 30th January.

The Conservator again left Moulmein on the 17th February, and, marching up the Salween right bank and the Yoon-za-lin valley *viâ* Pa-poon, met the Inspector-General on the 6th March at Haw-thoo-ta camp between the Kaw-loo-do and Loo-ma-tee stockades. He thence accompanied the Inspector-General *viâ* the Upper Salween and Meh-tha-louk forests to Pa-poon and the Sin-zweh and Ka-hee-loo reserves, and proceeded thence with the Inspector-General down the Salween, and arrived at Moulmein on the 23rd March.

Organization of forest ranges and beats, Pegu circle.

61. The following is a statement of forest ranges and beats into which the forest divisions in the Pegu circle have been divided :—

1.—Prome Division.

(*a*) Myay-deh range.
Boot-leh and Padeh beats—
(*b*) Nawin range.—North, Middle, and South Nawin and Maha-tha-man beats.
(*c*) Ka-ma range.
(*d*) Pa-doung range.

2.—THARRAWADDY DIVISION.

(*a*) Shway-lay range.—Upper and Lower Shway-lay and Ka-boung beats.
(*b*) Bobon range.—Toung-nyo, Minboo, and Bawbin beats.
(*c*) Ga-mone range.—Toung-choung, Ga-mone, and Min-hla beats.
(*d*) Beelin range.—Moke-ka Beelin, Koon Beelin, and Thone-zeh beats.

3.—RANGOON DIVISION.

(*a*) Hlaing range.—Meenin, Oke-kan, Kinpadoe, Thanat-choung, Gyobyoo, and Hmawbee beats.
(*b*) Magayee range.—
(*c*) Poung-lin range.—Poung-lin and Kyet-pyoo-gan beats.
(*d*) Pegu range.—Ga-mone, Shway-loung, and Ko-doo-gweh beats.

4.—SITTANG DIVISION.

(*a*) Bone-ma-dee range.—Binbyeh, Gway-theh, Koonone, Kannee, Pyoon choung, Youk-tha-wa, and Thouk-yay-hat beats.
(*b*) Tha-ga-ya range.—Myo-hla, Kyouk-masin, Yay-nay, Thaing, Yay-nee, and Swa beats.
(*c*) Zay-ya-wadee range.—Ka-boung, Pyoo, Koon, and Bone-kogwa beats.

5.—SHWAY-GYIN DIVISION.

(*a*) Bawnee range.—Kawleeya, Yay-nway, and Kawa beats.
(*b*) Sittang range.—Sittang and Beelin beats.
(*c*) Kyouk-kyee range.—Mone and Shway-gyin beats.

6.—WESTERN DIVISION.

(*a*) Henzada range.
(*b*) Bassein range.

Organization of forest ranges and beats, Tenasserim circle.

62. Demarcation not having made much progress in the Tenasserim circle, and changes being under contemplation, a statement of forest ranges and beats can only be noted in the case of the West Salween division, *viz.*,—

(*a*) West Salween range, Upper Salween, Wa-moo, Sin-zweh, Ka-hee-loo, Beelin, and Done-da-mee beats.

Services of divisional and other officers.

63. In both the Pegu and Tenasserim circles, divisional and other officers, and officers in charge of central offices, continued to give satisfaction.

SECTION II.—RESERVED FORESTS.

PEGU CIRCLE.

A.—PROME DIVISION.

1.—Area and Boundaries.

New reserves sanctioned.

64. The following reserves were sanctioned during the year under the Forest Rules of 1865:—

	Square miles.
1.—Nga-loo-san, sanctioned in Revenue Department notification No. 45F., dated 8th May 1879	1
2.—Tha-yet-myo East Yoma block, sanctioned in Revenue Department notification No. 105F., dated 23rd December 1879	125

Proposed reserves.

65. The Nawin reserves of 105 square miles, exclusive of 43 square miles burdened with rights of toungya-cutting, were re-examined by the late Mr. A. O. Brown, as Civil Officer, and Mr. Oliver in April and May 1879. Their reservation has been approved of by the District Officer and Commissioner, but has not yet received the sanction of the Chief Commissioner.

The forests west of the Irrawaddy, in the Tha-yet-myo Civil district, were examined by Messrs. Burne (Civil Officer) and Oliver (Forest Officer), and proposals were submitted for the reservation of the following forests:—

	Square miles.
Seing-doo	2
Than-boo-la	9
Mindone Yoma	100
Hlwa Yoma	160
Nga-net	5
Total ..	276

66. The cost of the preliminary demarcation of these blocks was Rs. 2,775-8-4, of which however only Rs. 167-14-4 have been charged in the accounts of the year.

Cost of preliminary demarcation.

Rupees 2,639-8-4 of the sum, which, without further explanation, would seem excessive, are chargeable to the pay and allowances of Civil Officers for three months, and only Rs. 136 for blazing lines, &c.

The Prome division has also been debited with the cost of rectifying the frontier line near the Pegu Yoma to the amount of Rs. 774-3-11.

67. The boundary pillars round the Ta-yay-kyaw block of reserves (58 square miles) were repaired, and the Nga-loo-san reserve was included in the same chain of demarcation by the construction of 16 new pillars.

Renewal of boundary marks.

Hard wood posts, bearing iron tablets with current numbers, were fixed in each pillar. The total cost of the works amounted to Rs. 120-12.

2.—Protection and Improvement.

68. (*a*) *Teak toungya.*—Sixty-seven acres of teak toungya were planted in the Choung-zouk reserve by the villagers of Nga-loo-san and Kadin-nga-sin, at a cost of Rs. 273-7-6, inclusive of cost of seed and surveying. The number of plants per acre is only 291 out of a possible 744, the seed being sown in eight lines six feet apart, and a space of 30 feet between each eight lines. This is not a very good result; but both the cultivators and the Overseer were new to the work, and much of the seed was sown too deep.

Teak toungya plantations in Choung-zouk reserve.

If it is however taken into consideration that 67 acres of worthless bamboo pone-zo are stocked with 19,550 plants, and at the low rate of Rs. 4-1-4 per acre, the operation can but be regarded with satisfaction.

69. (*b*) *Dibbling.*—One hundred and seventy baskets of teak seed were dibbled in suitable places in the fire-traced portion of the Choung-zouk reserve :—

Artificial aid to teak reproduction in Choung-zouk reserve.

	Rs.
Value of seed	191
Cost of sowing	221
Total ..	412

The seed has germinated fairly well; but it is impossible to form an opinion of the success or failure of an operation of this kind during the first season.

The sowings of last year which were reported a complete failure, *vide* paragraph 20, were found on inspection at the close of the second rains to be the most successful operations of that kind yet undertaken.

The sowings of 1877-78 are also doing well; but the plants are still small, if compared with those grown in toungyas, though hardier.

It can hardly be hoped that these dibbling operations will be successful everywhere and under all circumstances; but gradually the most valuable experience is gained as regards localities, &c., where these means of cultivation can be utilized advantageously.

All sowings in this fire-traced reserve were weeded where necessary, and, wherever they were sufficiently established, they were cleared overhead by girdling overhanging trees. The cost of this operation amounted to Rs. 191-8-0.

70. Of the mahogany seed sown, 41 germinated of the first supply, and none of those of the last, of which the seed was reported to have been in a heated condition, and partly mouldy. A very small quantity was sown at Prome, and the rest at Kadin-nga-sin.

Experimental cultivation of mahogany.

71. (*c*) *Thinnings.*—The lower part of the Prome teak plantation has been thinned at a cost of Rs. 8-4-0, and 158 poles were extracted.

Thinnings.

72. (*d*) *Breaches of forest rules.*—No breaches of forest rules within the reserves were prosecuted.

Breaches of forest rules.

73. (*e*) *Fire-protection.*—The Prome plantation has been successfully fire-traced at a cost of Rs. 25.

Fire-protection in Prome plantation.

74. In the Choung-zouk reserve, an estimated area of 2,600 acres was attempted to be protected; however, two fires occurred. The first was of trifling extent, and was put out after some 30 or 40 acres were burnt. It occurred in the middle of March, and is, in all probability, due to sparks flying in from the burning jungle outside the fire-trace. The fire did not extend to any place where works of improvement had been carried out. The second fire occurred on the 15th April, and was caused by the burning of toungyas for teak planting. The toungya-cutters had arranged to burn their yas at a somewhat later date, and the forest ranger in charge was deputed to other duties. A sudden change in the weather however made the immediate burning of the yas desirable, if not necessary, and the villagers burned them in the absence of the Ranger.

Fire-protection in Choung-zouk reserve.

After the toungyas had been fired, violent gusts of wind sprang up and spread the fire from the burning toungyas across the fire-trace in all directions, and an area of about 400 acres was burned before the fire could be extinguished. The fire-trace round the toungyas had been cleared for a width of 200 feet; but the wind carried the burning material clear across the trace. The fire is reported to have been one of those accidents that no amount of precaution can prevent.

None of the teak toungya plantations were touched, and only quarter of an acre of the area in which teak seed had been dibbled in was burned through. The fire was a ground fire, of so slight a nature that the young teak seedlings have not even been killed, and the damage done is not very important.

The amount expended in fire-protection in the Choung-zouk reserve during the season was Rs. 349-8-0, of which Rs. 274-8-0 have been charged in the accounts of 1879-80.

3.—Girdling.

75. Two hundred and fifty-seven trees were girdled in the Wa-pyoo reserve and 673 in the Mee-do reserve at a cost of Rs. 186.

Girdling operations.

B.—THARRAWADDY DIVISION.

1.—Area and Boundaries.

76. The area of the reserves in this division remains unaltered, and no new proposals have been submitted.

Area of State reserves unaltered.

77. The boundaries of all reserves have been inspected, and iron tablets, with running numbers, have been nailed to the hard wood posts in the boundary mounds along the outer boundary line. The cost of this work from the Kan-nee reserve in the Toung-nyo to the Nat choung in the Thone-zeh forest district amounted to Rs. 152-10-0.

Inspection of boundaries and renewal of boundary marks.

2.—Protection and Improvement.

78. (*a*) *Teak toungya plantation.*—Throughout the division it has been found advisable to return to the old plan of sowing the seed, at 6+6 feet. The cultivators prefer it, and in irregular plantations like toungyas, which cannot be weeded and looked after to the same extent as compact plantations, this method has the advantage that the seedlings outgrow the danger at an earlier period of being overgrown and suppressed.

Distance of planting in teak toungya plantations.

79. In the Nyan-leh reserve, three men planted eight acres, and, at the end of the season, 9,790 seedlings were counted, or about 1,200 per acre. The toungyas are as completely stocked as any plantation with strong and healthy plants, and the cost, including taxes and teak seed, amounted to Rs. 100-8-3, or Rs. 12-8-0 per acre.

Teak toungya plantations in Nyan-leh reserve.

80. In the Kan-gyee reserve, an area of 65·25 acres were planted by 30 men. The plants counted amounted to 5,464, or 838 per acre, and the total cost, including taxes, &c., amounts to Rs. 588-9-8, or Rs. 9-0-4 per acre.

Teak toungya plantations in Kan-gyee reserve.

81. In the Choung-wa reserve, toungya plantations were formed by six men, and 18 acres were cultivated, containing 21,171 seedlings, or 1,168 per acre.

Teak toungya plantations in Choung-wa reserve.

The total cost of these plantations was Rs. 228-13-6, or Rs. 12-10-0 per acre.

Teak toungya plantations in Moke-ka Beelin reserve.

82. In the Moke-ka Beelin reserve, Pan-la, with 16 Karens, cultivated an area of 85·5 acres, raising 56,061 plants, or 655 per acre, at a total cost of Rs. 639-4-0, or Rs. 7-7-8 per acre.

In one of the yas, shaw (*sterculia*) was sown; but only 39 plants were raised. In another, wild mango was sown in alternate lines with teak. The young plants are thriving and are growing as fast as teak, and it is hoped that this mixture will answer well, the pure teak being by no means a soil-improving tree.

The experiment will be carefully attended to, and somewhat extended.

Teak toungya plantations in Kone Beelin reserve.

83. In the Koon Beelin reserve, at the source of the Hmya choung, the Karens of Tho-dee-teh, 17 in number, planted 41 acres, and the counting showed 30,132 seedlings, or 735 per acre, the total cost amounting to Rs. 348-4-6, or Rs. 8-7-9 per acre.

Summary of teak toungya plantations in Tharrawaddy division.

84. The total area in the Tharrawaddy division planted during the year is 217·873 acres, on which 1,71,802 seedlings were counted at the end of the season.

The cost is, including taxes, seed, &c., Rs. 1,906-1-11, or Rs. 8-11-11 per acre. This is eminently satisfactory, as the higher cost is entirely due to the larger number of seedlings raised, the cultivators receiving payment at the rate of one rupee per hundred seedlings. The average, per acre, last year, was Rs. 350: this year it is Rs. 788.

Filling up blanks in old toungya plantations.

85. Rupees 52-8-0 was spent in filling up blanks in the Bwet yahs of 1878; but the success of this operation seems doubtful. The seedlings are very small, and it is questionable whether they will be able to stand the pressure of jungle around them, as the plantation is only to be cleared for one year more.

Artificial aid to reproduction of teak in fire-traced reserves.

86. Ninety-seven baskets of teak seed have been dibbled in the Bwet reserve under dead bamboos at a cost of Rs. 253.

The seed has germinated well, and the young plants are plentiful and thriving. In the Nyan-leh reserve, 48 baskets of teak seed were dibbled in places where Myin-wa had flowered and died. The experiment has been so far successful. The cost of dibbling and weeding amounts to Rs. 162-4-0.

In Kan-gyee reserve, 94 baskets of seed were sown in blanks under girdled trees; the seed has germinated well; the cost of the operation amounts to Rs. 227.

The forest goungs have, throughout the year, on whatever work employed, freed with their gangs all suppressed teak saplings and cut creepers. This work is of the greatest importance, and the benefit derived therefrom can only be realized after a careful and searching inspection. The number of young trees saved from destruction by these simple means is extremely large.

Experiments with mahogany seed.

87. Twenty-four seeds in all germinated of the first consignment of mahogany seed received, and only one of the second, of which the seed was bad.

Weeding of two previous years in toungya plantations.

88. (*b*) *Weeding and thinning of plantations.*—The teak toungyas of the two previous years have been cleared at a cost of Rs. 643-5-11, distributed as follows:—

	Year.	Cost. Rs.	A.	P.
Bwet	1878	47	8	0
Gway-douk-san	1878	14	12	8
Baw-bin	1877	52	14	5
Ditto	1878	51	4	8
Kan-gyee	1878	107	14	2
Moke-ka Beelin Pan-leh..	1877	100	6	0
Ditto	1878	161	8	0
Koon Beelin Tho-dee-teh	1877	50	2	0
Ditto	1878	57	0	0
Total ..		643	5	11

The Kway-ma-aing plantation has been thinned during the year at a cost of Rs. 22.

89. (*c*) *Fire-protection.*—Fire-protection operations have been most successful, except in the case of Nyan-leh reserve.

Fire-protection most successful.

90. The fire-protected area of this reserve has been increased by the addition of 10,080 acres, making now a total of 24,260 acres. To the commencement of the rains the reserve was successfully protected; but, since then, a small patch of about 18 acres has been partially burned. The fire started about half a mile from the trace inside the reserve, and, upon examination, marks were found of a man having been engaged in guana-hunting where the fire originated. The offender has not been discovered. The total cost of this season's protection amounts to Rs. 1,286-8-0.

Fire-protection in Moke-ka Beelin reserve.

91. The fire-tracing operations have been successful; but, while burning the teak toungyas, the fire spread into the reserve, and burnt over 17 acres. It appears that the men, having burnt the yas, and looked round to see that all danger of the fire-spreading was over, returned home. They omitted to notice a smouldering log, and the wind, during the night, carried some sparks beyond their trace, and caused the fire. The goung in charge has been punished departmentally for negligence. The total cost amounts to Rs. 154. Myo-dwin plantation has been successfully protected at a cost of Rs. 45.

Fire-protection in Baw-bin and Myo-dwin plantation reserves.

92. Bwet reserve has also remained unburnt, and the cost has been Rs. 816-2-3. The measures adopted to protect Kan-gyee reserve have also been successful, the work costing Rs. 988-2-6.

Fire-protection of Bwet and Kan-gyee reserves.

93. Some 600 acres of Nyan-leh reserve have been burnt, entirely owing to neglect of orders by the reserve goung. The fire crossed the trace at the same place as last year. The goung had received orders to erect a teh, and to sleep there at night with three or four watchers; instead of which, as soon as Forest Ranger Moung Kolleh left, he returned to his village, and, during the night, the fire crossed by means of a fallen tree. As the man is headman of Nyan-leh village, has hitherto worked well, and it would be very difficult to obtain here a man with equal influence and knowledge of planting work, &c., it was considered advisable to punish him, by fine departmentally, instead of prosecuting him. The total cost of the work was Rs. 1,236-14.

Fire-protection in Nyan-leh reserve.

It is satisfactory to know that the fire in this reserve did not touch any of the planted areas, or those in which the dibbling of teak seed had been commenced.

94. The area included in the fire-trace has been increased this year from 92 acres to 2,180, so as to contain in one block all the teak toungya plantations of Pala-teh. The whole area has been successfully protected at a cost of Rs. 120.

Fire protection in Thone-zeh reserve.

95. The usual arrangements were made to protect the teak toungyas on the Shouk-pin (Moke-ka) stream, area 38 acres; Min-hla myoung, area 239 acres; and Gway-douk-san, area 26 acres. Fire was successfully kept out of all at a cost of Rs. 50, Rs. 310, and Rs. 36-14 respectively. As in former years, no attempt was made to protect the seven small patches, 41 acres in all, sown with teak by the Karens in the Shway-lay, Toung-nyo, and Baw-bin forests. The areas were originally very poorly stocked; the Karens also refuse to undertake their protection, and, to carry out the work departmentally, would cost far more than the toungyas are worth.

Fire-protection of detached teak toungya plantations.

96. The result of the whole season's work is as follows:—

Summary of fire-tracing work in Tharrawaddy division.

Acres attempted, 30,917, acres protected, 30,282, total cost, Rs. 5,043-15-3

97. (*d*) *Communications.*—The cart-road leading through the middle of the Kan-gyee reserve, which also forms a fire-trace, has been straightened, and all trees on it have been felled and removed. In course of time it will be levelled and bridged.

Road in Kan-gyee reserve.

98. (*e*) *Blasting.*—Overseer deCosta was sent up from Rangoon Depôt, and blasted the obstructions in the Tone-thay and Thayet choungs, feeders of the Baw-bin. The Conservator being absent from Rangoon, there was some difficulty in procuring blasting powder; and Mr. deCosta began work only late in the season.

Blasting in Baw-bin reserve.

99. (*f*) *Prosecution.*—Four men were prosecuted for cutting toungyas within the sanctioned Min-boo Baw-bin reserve. One man was sentenced to a fine of Rs. 50, or two months' imprisonment; and the other three to a fine of Rs. 25, or one month's imprisonment each.

Breaches of forest rules.

Eleven men were prosecuted for cutting cutch trees inside the Thit-cho reserve, and fined eight annas each.

C.—RANGOON DIVISION.

1.—Area and Boundaries.

100. The area of the reserves in this division remains unaltered. Sanction has not as yet been obtained for the reservation of the Oke-kan forest, which was examined by Messrs. Hill and Brown, and proposed in 1878.

State reserves.

101. During the year proposals have been made for the reservation of a forest area between the Hlaing Yoma and the railway. The forest has been examined by Mr. Carter and the Conservator; and the question, whether and in how far the reservation would influence the well-being of the surrounding population, has been inquired into by Major Plant, the Deputy Commissioner of Hanthawaddy.

Areas proposed for reservation.

Since then the proposed boundary has been thrown back on the recommendation of the Inspector-General of Forests, which, it is hoped, will result in an early sanction.

102. Mr. Carter has examined the forests on the Pegu river, and selected an area for reservation to the north of the Ko-doo-gweh stream, amounting to some 150 square miles.

Selection of areas for reservation on the Pegu choung.

2.—Protection and Improvement.

103. The Magayee teak plantation has not been extended this year, as the clearings, 108 acres in extent, would not burn. They have now however been burnt, since the close of the year, in spite of early rains, and are being sown.

Regular teak plantation at Magayee.

104. A belt, 100 feet broad, following the boundary of the Magayee reserve, near the railway line, and containing 41½ acres, has been planted with mango, jack, toung-thaleh, kyet-mouk, and gan-gaw, all of which are evergreen trees, affording a dense shade.

Evergreen belt.

No trees were felled, the shade over head being light, and not likely to damage the seedlings.

These belts will, it is hoped, in some years' time, greatly facilitate fire-tracing operations, and at the same time form a much more valuable forest than that now on the ground. The cost of the planting of the belt amounts to Rs. 1,033.

105. The present number of *ficus* plants left in Magayee is 106, 13 more having died during the year from the effects of shade over head; 51, which stand in the open, do well, and average 10½ feet in height by six inches in girth, the largest, six years old, measuring 20 feet in height and one foot in girth. The

Ficus elastica cultivation at Magayee.

remaining 55, in order to be saved, must be transplanted, and mounds, 4½ feet high, have been made in a belt of kaing grass, on which the *ficus* will be put out during the rains.

Mahogany cultivation at Magayee.

106. Thirty-six plants were put out during the rains, seven of which were two years old, and 29 one year old, plants. To keep these few plants under close observation, they were planted on the road near the forest hut, where the soil is by no means as good as that in the more eastern part of plantation; but, even there, they are looking very healthy, and the largest plant is four feet high.

It seems to be, beyond doubt, that the climate of Pegu suits the growth of mahogany, and experiments with this, the most valuable of all trees, should be continued. The planting of this tree, which, at the early age of 80 years, has been sold in Calcutta at Rs. 1,000 per tree, should be encouraged along municipal and district roads, where every single tree is fenced and taken care of. It is certainly more advisable to fence and spend money and care on valuable than on useless trees. Mahogany seedlings have, with great success, been raised in the cantonment gardens of Rangoon by Colonel Hawkes, and there is no reason why they should not be raised in the public gardens at Rangoon by the thousand if the seed were procured.

Experimental cultivation of vanilla.

107. One of the vanilla plants has flowered; but most of the buds were injured by insects. Fertilization was rendered extremely difficult, as the plants have crept up the trunks of the trees on which they were planted to a great height. One pod only has, as yet, been obtained; but the other plants also are beginning to flower. The experiment has shown that vanilla will flourish, flower and fruit in this country; but it is difficult to see how it can be brought to any further practical result by the means at the disposal of the Forest Department.

Australian and Queensland seeds.

108. A quantity of Australian, and Queensland seeds, mostly *eucalypti*, has been sown, and germinated well; but the practical value of introducing foreign species of trees except those of the most valuable kinds, as mahogany, is simply *nil*.

Bryophyllum on fire-traces.

109. Experiments have been made on a small scale to cover some of the fire-traces with *bryophyllum*, a fleshy herb belonging to the *crassulaceæ*. The plant grows wonderfully fast, and spreads rapidly; but whether it will kill out the kaing grass or be killed by the kaing grass will be ascertained during the present rains.

Inspection rides in Magayee plantation.

110. (*a*) *Conservancy works.*—Three inspection rides, 30 feet broad and of an aggregate length of 13,000 feet, have been cut through the plantations of 1876 and 1877, cutting up this large block of 595 acres into six compartments, and thus facilitating inspection and protection from fire at a cost of Rs. 210-0-9.

Inspection rides in Kyet-pyoo-gan plantation.

111. The plantation of Kyet-pyoo-gan has, for the same reason, been cut into three blocks, by rides 42 feet broad, aggregating in length 8,477 feet, and costing Rs. 317-8-0.

Fire-protection in Kyet-pyoo-gan plantation.

112. (*b*) *Protection from fire.*—The Kyet-pyoo-gan plantation has been successfully protected from fire, however, at the large cost of Rs. 1,322, of which Rs. 1,237 have been spent during the year. This was caused by increasing the breadth of all fire-traces from 50 feet to 100 feet, an increase rendered necessary by the fact that the plantation is closely surrounded by numerous toungyas. The traces having once been widened, the protection will cost Rs. 800 in future years.

Fire-protection in Magayee plantations and part of Magayee reserve.

113. The Magayee plantations have also been protected successfully; but, of the Magayee reserve, about 210 acres, included within the fire-traces, were burnt. This season's work embraced an additional area of 1,000 acres. The

whole of the Magayee plantations are now traced in one block, sub-divided into compartments by interior fire-traces. The area now protected is 2,992 acres against 1878; and the length of the exterior trace is 79,000 feet, against formerly 1,35,000, the length of the interior tracing being 44,723; the cost of cutting and burning is Rs. 1,593, against Rs. 1,797; and the cost of watchers, Rs. 501 against Rs. 604, effecting a total saving of Rs. 307.

Roads in Magayee plantations and reserve.

114. (*c*) *Communications and Buildings.*—The extension of the Magayee road to Dee-doo kwin has been completed, with the exception of two culverts. A bridge over the Magayee stream would bring the villages of Kin-ba-dee, and those on the Dat choung and south of the Oke-kan choung, in direct cart communication with the Railway Feeder road, and with the railway itself, if the pick-up station with siding, for which the surrounding villages have petitioned several times, were made at Dee-doo kwin.

Forest office buildings.

115. The Pegu Forest Office has been completed at a total cost of Rs. 5,294-12-6, of which Rs. 4,840-13-0 was disbursed during the year, and Rs. 307-4-0 in 1878-79, leaving Rs. 146-11-6 still to be paid.

Rest-houses.

116. The rest-houses at Magayee, Taw-la-teh, A-waing, and Zoungdoo, have been repaired at a cost of Rs. 146-8-0.

Breaches of forest rules.

117. A case of illicit felling occurred in the Thit-pyat reserve; but the Magistrate demanded proof of dishonest intent, and the case was thrown out.

D.—SITTANG DIVISION.

1.—Area and Boundaries.

Additional reserves sanctioned.

118. The following reserves were sanctioned during the year :—

A.—East Swa reserve, 27 square miles.

Notification No. 26 of 24th March 1880.

B.—Bone-doung reserve, 40 square miles.

Proposed reserves examined by Forest and Civil Officers.

119. The forests and settlements on the Ka-boung stream have been visited and examined by Messrs. Copleston and Hill, the interests of the people have been inquired into, and forest areas have been preliminarily demarcated. Proposals are ready for the reservation of 250 square miles. The cost of this selection amounts to Rs. 7,609-14-3, of which Rs. 4,102-8-8 represent the pay and allowances of the Civil Officers.

Forests preliminarily examined by Forest Officer.

120. The forests in the Thagaya circle have been examined by Mr. Whittall, and six reserves have been preliminarily selected. The general approval of the Deputy Commissioner has been obtained to the reservation of these tracts, and, if a Civil Officer is deputed, they can be constituted reserves during the next season.

Similar proposals are almost complete for a reserve in the Kyouk-ma-sin forest and another in the Myo-hla.

It will thus be seen that a quick settlement of large areas depends only on the deputation of Civil Officers.

2.—Improvements.

Evergreen belts for fire-protection.

121. The beginning has been made, on a small scale, of planting an evergreen belt round the more exposed portions of the boundaries of the Pyoon-choung and Yay-nay reserves.

122. Eight maunds of tea and 60lbs. of coffee seed have been sown in seed beds at Than-doung, and 10 maunds of tea and 20lbs. of coffee at the Pyoon-choung The seeds at Than-doung germinated fairly well; but not so those sown in the Pyoon-choung plantations.

Experimental cultivation of tea and coffee.

123. *Pithecolobium saman*, an ugly but quick-growing tree, which has been introduced into this province, does not grow quite as fast in the Pyoon-choung as elsewhere.

Pithecolobium.

124. Ninety thousand cinchona plants have been reared in seed beds. Only a portion of these will be used for filling up blanks; the rest have been offered for public distribution free of cost; but, up to the end of the year, no applications have been made by the natives of the surrounding country.

Cinchona cultivation.

The general appearance of the cinchona plantation is very much more satisfactory since the clean weeding has been stopped, and there seems now no doubt that the want of success is not due so much to bad soil and wrong elevation as to the long dry season.

By means of constant watering during the dry season the trees can be kept flourishing; but this is, of course, out of the question over a large area. The cost would be enormous.

Thakeh, the Karen, who was in charge of the plantation almost since its commencement, was too conservative, and resigned office when it was insisted upon that common weeds should be allowed to have a place amongst the cinchona.

125. The expenditure on the planting of cinchona, tea, and coffee, which is not chargeable against forests, amounts to Rs. 4,904-4-4, made up as follows :—

Expenditure on cinchona cultivation and other experimental cultivations.

	Rs.	A.	P.
Establishment	720	0	0
Coolie-roll (Than-doung)	2,764	4	6
Do. (Pyoon-choung)	429	5	3
Cost of tea and coffee seed	902	12	9
Miscellaneous (Than-doung)	28	3	10
Do. (Pyoon-choung)	59	10	0
Total ..	4,904	4	4

126. (*a*) *Fire-protection.*—The fire-protection both in the Pyoon-choung and Yay-nay reserves has been successful, for, though it entered the former reserve, it was beaten out at once before any damage was done.

Fire-protection of Pyoon-choung and Yay-nay reserves.

The cost of protecting the Yay-nay reserve amounted to Rs. 438-15-11; that of keeping fire out of the Pyoon-choung to Rs. 486-1-4.

Thus, 9,193 acres were protected for Rs. 925-1-8.

127. (*b*) *Buildings and communications.*—A rest-house was built at Zee-byoo-bin, on the boundaries of the Yay-nay reserve, for Rs. 509-8-0, and another at Tabet-kweh, on the Bone-doung reserve, for Rs. 550.

Rest-houses.

E.—SHWAY-GYIN DIVISION.

1.—Area and boundaries.

128. No alteration was made in the area of reserves; but the Bin-byee reserve was finally demarcated.

Demarcation of state reserves.

2.—Improvements.

129. *Communications, &c.*—Houses for the depôt establishments at Myit-kyo and Ma-douk were erected at a cost of Rs. 114-4-0, and for the elephant establishment at Shway-gyin for Rs. 25.

Depôt-houses.

F.—WESTERN DIVISION.

No State reserves.

130. There are no reserves in this division as yet.

SECTION III.—UNRESERVED FORESTS.

PEGU CIRCLE.

A.—PROME DIVISION.

Breaches of forest rules.

131. Only one prosecution was instituted by the Forest Department for breaches of rules regarding teak trees, and nine persons were punished with fines, varying from Rs. 8 to Rs. 56, for the unlawful cutting and using of teak in the Myay-deh forest. Several cases are however still pending, which will be taken up at the close of the working season.

For breaches of cutch rules, in the Nawin forest, two men were fined Rs. 20 each, one man Rs. 100, and one man Rs. 75 ; Rs. 320 were recovered from Moung Shway Myin, an Upper Burma permit-holder, as a royalty on 80 logs, which had been removed by him from the Myay-deh forests in British territory (*see* paragraph 125, page 18, of last year's report).

The remainder of the logs felled by him were made over to the Government contractor, and brought out by him.

3.—Yield and Working.

Out-turn during the year.

132. (*a*) *Timber extracted by departmental agency.*—The following is the out-turn of the Prome division:—

						Rs. A. P.		Rs. A. P.	
Boot-leh	forests,	1,014 logs,	delivered at	Rangoon, costing ..		12,753 8 0	@	12 9 2	per log.
Nawin	do.	1,934,	ditto	ditto	,, ..	24,965 7 0	,,	12 14 6	,,
Do.	do.	17,	ditto	Henzada	,, ..	216 10 0	,,	12 11 10	,,
Do.	do.	209,	ditto	Prome	,, ..	954 4 0	,,	4 9 0	,,
Min-boo	do.	557,	ditto	Rangoon	,, ..	11,091 2 8	,,	16 10 11	,,
Myay-deh	do.	108,	ditto	ditto	,, ..				
Ma-ha-tha-man	do.	114,	ditto	Theh-gone Railway station ..		507 13 0	,,	4 7 2	,,
Total ..		3,953 logs, costing		..	..	50,488 12 8		12 12 4	

Four contractors were employed to bring out this timber.

In addition to this, five logs from the Prome Timber Depôt and 34 logs from Tha-leh-dan were rafted to Rangoon at a cost of Rs. 3 each.

Contracts for the ensuing year.

133. For the year 1880-81, six contracts have been entered into for extraction of 2,500 logs. The work already done on these contracts, inclusive of a small balance of neaped timber, is as follows :—

	No. of logs.
To Nawin stream.	844
,, Pa-deh do.	311
,, Boot-leh do.	300
,, Ma-deh do.	97
,, Min-done do.	26
Total of logs dragged to floating streams ..	1,581

Contractors' outstandings.

134. The outstandings against contractors on the 1st April 1880 amounted to Rs. 9,868-10-8. With the exception of two items, of Rs. 395 and Rs. 60-8-0, outstanding (in former years), the whole amount is more than covered by work done. The above sum includes an item of Rs. 9,113-2-8 against the Min-done and Myay-deh contractor, whose accounts could not be adjusted before the close of the year.

Girdling operations.

135. Three thousand and seventy-three teak trees, above six feet in girth, at six feet from the ground, yielding good marketable timber, and standing in easily accessible places, were girdled outside State reserves.

Of these, 1,402 trees were killed by Forest Ranger Moung Kyaw Doon in the Boot-leh forests and 600 in the Pa-deh at the cost of Rs. 400. Mr. Huddleston killed in the North Nawin forests 631 trees and 464 trees in the Middle Nawin at a total cost of Rs. 216. It is reported that in the tracts now worked all available 1st class teak trees have been girdled. Sketch maps, showing in detail the localities where girdling operations have taken place, have been filed in the Prome Forest Office.

Drift timber.

136. The control of drift timber operations having been transferred to the Western division, there is little to record under this head. The balance on hand, at the commencement of the year, was 38 logs; 113 logs more were salved during the year, making a total of 151 logs. Of these, 113 were made over to owners, 26 logs transferred to the Western division, and 12 remain on hand. The Prome division was also debited with Rs. 654-8-0 on account of 77 logs salved and taken to Rangoon by the Western division.

Disposals of timber locally.

137. The following logs were disposed of locally :—

	Rs.	A.	P.
At the Prome Depôt to various purchasers—			
Five teak logs, measuring 315 cubic feet, for	252	10	6
Two thit-ya squares, measuring 48 cubic feet, for	33	9	6
At Henzada to the Executive Engineer—			
Seventeen teak logs, measuring 899 cubic feet, for	899	0	0
At Theh-gone Railway station to the Superintendent of Police, Prome—			
One hundred and fourteen teak logs, measuring 2,900 cubic feet, for ..	897	0	0

Elephant establishment.

138. Three elephants were attached to this division during the year. One of them has been suffering from a sore back since February; otherwise, the health of the animals has been good.

Disposals of timber in the forests.

139. (*b*) *Timber and forest produce extracted by consumers or purchasers.*—In the Nawin forest, 110 buried logs, dug out of the Nawin stream, realized, on the half-profit system, a net profit of Rs. 310; and 37 refuse logs, measuring 455 cubic feet, were sold for Rs. 91.

In the Min-done forest, eight logs, measuring 44 cubic feet, were sold for Rs. 8-10-0; and, in the Boot-leh forest, 108 logs, measuring 1,024 cubic feet, for Rs. 214-13-6.

Revenue realized on timber of reserved kinds extracted under trade permits.

140. The following statement exhibits the number of trade permits issued during the year :—

By whom issued.	Number of permits.	Number of trees. Pyingado.	Ingyin.	Thitya.	In.		Total.	Permit fees. Rs	A.	P	Remarks.
Deputy Commissioner, Prome.	These figures cannot be given, as no duplicates at all have been received from the Deputy Commissioner, Prome.							129	4	0	Includes Rs. 87-12-0, revenue of 1878-79, credited in 1879-80.
Deputy Commissioner, Tha-yet-myo.	And from Deputy Commissioner, Tha-yet-myo duplicates for Rs. 525-8-0 only ..							1,932	4	6	Includes Rs. 756-4-0 collected in previous year, but credited in 1879-80.
Prome Forest Office ..	167	187	77	321	2,583	..	3,118	831	4	0	
Total ..	167	187	77	321	2,583	..	3,118	2,892	12	6	

The amount realized at revenue stations was as follows :—

Name of station.	Number of logs and pieces.					Remarks.
	In.	Pyingado.	Thitya.	Ingyin.	Total.	
						Rs. A. P.
Prome	26,776	323	145	..	27,244	914 0 5
Ywa-doung and Nyoung-bin-zake ..	4,174	75	159	125	4,533	3,823 7 9
Total ..	30,950	398	304	125	31,777	4,737 8 2

The above revenue includes Rs. 986-15-0 from public departments. The decrease in revenue at the Prome station is due to a lessened demand for building materials. The Nyoung-bin-zake establishment was only maintained from the 1st December.

The cost of the revenue stations was as follows :—

	Rs. A. P.
Prome	207 7 6
Ywa-doung and Nyoung-bin-zake	758 13 0
Total ..	966 4 6

Revenue on cutch permits.

141. The revenue from cutch and charcoal permits amounted to Rs. 36,459. The fee on permits for cutch in the Prome district was raised from Rs. 5 to Rs. 10 per caldron per annum. In the Tha-yet-myo district, the system of selling the monopoly of boiling in different circles was abolished, and a fee of Rs. 5 per caldron for three months introduced instead. This partly accounts for the great increase in revenue on this head; but it is mainly due to the great demand for cutch, which has induced people to work in most inaccessible forests where, under old prices, cutch-boiling would yield no profit to the manufacturer.

It does not seem likely that the present revenue can be maintained (owing to the exhaustion of the cutch tracts), unless the material available in the reserves be utilized.

Timber extracted under free permits.

142. The following statement exhibits the number of trees of different species for which free permits were given :—

Name of district.	Number of permits issued.	Number of trees.									Total.
		Sha.	Pyingado.	Thitya.	Ingyin.	In.	Koke-ko.	Thitsee.	Pyin-ma.	Padouk.	
Prome	691	80	4,633	6,287	4,042	2,657	3	20	30	..	17,702
Tha-yet-myo	610	269	2,488	4,504	4,809	2,762	136	..	..	3	15,021
Total ..	1,301	349	7,121	10,791	8,851	5,419	139	20	30	3	32,723

The logs used under these free permits are mostly small saplings for Burman house-posts.

4.—Financial Results.

Receipts and expenditure in Prome division.

143. The Prome division, as per statement 49, exhibits receipts to the amount of Rs. 47,383-9-9, against an expenditure of Rs. 67,272-12-1.

Of the above income, Rs. 12,000 have to be transferred to the Tharrawaddy division on account of cutch revenue collected by the Deputy Commissioner of Prome in the Shway-lay township; on the other hand, Rs. 99,216-3-5, realized by the Rangoon Agency Office, must be credited to revenue, which thus stands:—

	Rs. A P.
Receipts	1,84,599 13 2
Expenditure	67,272 12 1
Showing a profit of	67,327 1 1

The expenditure does not, however, include Rs. 11,091-12-8, on timber delivered from the Min-done forests, which is still due.

B.—THARRAWADDY DIVISION.

2.—Protection and Improvement.

Prosecutions and breaches of Forest rules.

144. In this division one man was prosecuted for illegal issue of a permit, and was convicted and fined Rs. 20. Two other persons were convicted of having cut teak without permission, and fined Rs. 50 each, or in default 45 days imprisonment. One man was convicted of the theft of 11 small teak logs, and sentenced to two months' rigorous imprisonment. Two men were fined Rs. 20 each for felling two teak trees without permission, and three men Rs. 30 each, or one month's imprisonment in default for the same offence. Six individuals were prosecuted for being in possession of cutch trees without a permit. Though this was proved, the case was dismissed, as these trees had been given to them by a person who felled them on his toungya. Two other men were fined Rs. 10 each, or 14 days' imprisonment, for cutting cutch trees without a permit; and again 28 men were prosecuted for boiling cutch without a permit. Of these, 27 were punished with fines varying between Rs. 5 and Rs. 35. One of the men was discharged, as being only a coolie in the employ of one of the other defendants. Twenty other men were prosecuted for boiling cutch without permit; 14 of them were fined amounts varying from Rs. 5 to Rs. 40; but the remaining six were discharged, as the evidence showed that they had been defrauded of the cost of these permits by a former goung-gweh of the Forest Department. This *ex*-goung-gweh, Moung Shway An, was, on prosecution, sentenced to six months' rigorous imprisonment and a fine of Rs. 116, or imprisonment in default. One man was fined Rs. 50 for obstructing the Toung-nyo floating stream.

3.—Yield and Working.

Out-turn during the year.

145. (*a*) *Timber extracted by departmental agency.*—The following is the out-turn in teak brought out by Government contractors:—

Name of forest.	Number of logs.	Cost per log.	Total amount.	Remarks.
		Rs. A. P.	Rs. A. P.	
Toung-nyo	1,546	9 7 5	14,631 4 0	All delivered at the Rangoon Timber Depôt.
Thone-zeh	267	8 8 9	2,282 2 0	
Beelin	1,169	7 11 8	9,087 5 0	
Min-hla	988	8 18 9	8,811 6 0	
Baw-bin	3,177	9 12 11	31,267 10 0	
Oa-mone	1,180	8 18 3	10,418 1 0	
Ngapee-in	132	11 1 11	1 468 5 0	
Myoung choung	780	8 13 10	6,473 4 0	
Koon Beelin	209	6 15 10	1,461 9 0	
Myoung	165	11 12 7	1,945 4 0	
Shway-lay	918	10 8 8	9,340 6 0	
Minboo	912	9 6 6	8,582 8 0	
Moke-ka	480	9 5 10	4,497 0 0	
Total ..	11,818		1,09,716 0 0	

amounting to 11,818 logs, for which Rs. 109,716 were paid. Five hundred and twenty-two logs remained neaped in the different streams.

Contractors' accounts.

146. Twenty-three contractors were employed during the year, and, on the 31st March, only one account remained unadjusted; and, for this debtor's outstanding, Government holds mortgage bonds upon elephants to the full extent of his debts.

Elephants.

147. Eleven elephants loaned to contractors remained upon the Government rolls at the close of 1878-79. During the year under review, seven animals were struck off by the orders of the Assistant Comptroller-General, one animal has been paid for by contractors, and two were received from other divisions, leaving a balance of five elephants on the 31st March 1880.

Extraction of timber and forest produce by purchasers.

148. (*b*) *Timber and forest Produce extracted by consumers and purchasers.*—One hundred and twenty-eight tons of teak refuse were extracted by purchasers realizing Rs. 1,832-15-1; and 17 trees of different species were sold from the reserves for Rs. 60-9-2, as well as 203,700 bamboos, realizing Rs. 1,012-6-3.

Extraction of timber of reserved kinds under trade permits.

149. One hundred and seventy-seven trade permits for timber of the reserved kinds were issued by the Divisional Officer for 5,819 logs, yielding Rs. 2,568-12-0. The following table gives the number of each species :—

Cutch.	Pyingado.	Thitya.	In-gyin.	Pyin-ma.	In.	Kanyin.	Thitsee.	Thingan.	Koke-ko.	Total logs.	Totolrevenue.
											Rs. A. P.
20	3,656	602	4	423	939	106	6	62	1	5,819	2,568 12 0

Four thousand and eighty-six logs and 2,100 planks were passed at revenue stations realizing Rs. 4,819-10-3.

The following table shows the number of logs and pieces of different kinds :—

Pyingado.	Thit-ya.	In-gyin.	Pyin-ma.	In.	Kanyin.	Thitsee.	Thingan.	Total.	Revenue.
									Rs. A. P.
302	30	44	392	3,000 logs 2,100 planks	294	5	19	4,086 logs 2,110 planks	4,819 10 3

The Deputy Commissioner of Tharrawaddy realized, by the issue of permits, the following sums :—

	Rs.	A.	P.
Extraction of cutch	7,230	0	0
In-see	520	0	0
Thitsee	115	0	0
Charcoal	323	8	0
Permit to fell three trees	1	8	0
Total ..	8,190	0	0

The Deputy Commissioner of Prome also collected Rs. 10 on account of minor forest produce, and Rs. 12,000 have been realized on permits to boil *cutch* in the Shway-lay forest district; but this amount has, in statement 49, been credited to the Prome division.

Free Permits for timber of reserved kinds.

150. The following is a statement of free permits issued according to the duplicates received from the Civil Officers :—

By whom issued.	Number of permits.	Cutch.	Pyingado.	Thitya.	In gyn.	Pyin ma.	Thitsee.	In.	Kanyin.	Total.
Assistant Commissioner, Poung deh	26	85	193	60	..	10	..	308	..	656
Deputy Commissioner, Tharrawaddy . ..	249	2,570	1,868	645	377	2,113	..	915	16	8,504
Assistant Commissioner, Tharrawaddy	29	496	236	128	15	125	5	124	20	1,149
Deputy Conservator of Forests, Tharrawaddy ..	172	1,345	827	386	321	454	..	104	..	3,437
Total ..	476	4,496	3,124	1,219	713	2,702	5	1,451	36	13,746

151. (*c*) *Communications.*—A new channel below the Prome and Poung-deh road is being cut for the waters of the Shway-lay. After all timber had been floated out last rains, a very heavy flood took place, and the rubbish brought down by it completely closed the stream for some 400 yards, raising the bed to the level of the adjacent country. The Toung-nyo stream has been cleared and deepened wherever necessary, and an obstruction in the Baw-bin choung, about 1,000 feet long, has been cut through.

Shway-lay and Toung-nyo streams improved.

152. Girdling has been carried on in the Toung-nyo and Ga-mone forests outside reserves, and, up to the end of the year, 2,059 trees were girdled in the Lower Ga-mone, at a cost of Rs. 491-11-9, and 4,166 trees in the Toung-nyo forest at a cost of Rs. 633-3-3.

Girdling operations.

4.—Financial Results.

153. According to statement 49, the revenue realized during the year amounted to Rs. 21,344-11-9, against an expenditure of Rs. 164,969-9-4, giving a deficit of Rs. 143,624-13-7. To the above income have however to be added Rs. 12,000 on account of cutch permits, shown in form 49 in the Prome accounts, as well Rs. 213,302-7-5 realized by the agency office on account of the division. The actual account of the division stands therefore as follows:—

Receipts and expenditure, Tharrawaddy division.

	Rs.	A	P
Income	2,46,647	3	2
Expenditure	1,64,969	9	4
Surplus ..	81,677	9	10

During the year sanction was received to write off Rs. 2,769-15-0 as irrecoverable. This amount was the balance outstanding against the old pyingado sleeper contractors.

C.—RANGOON DIVISION.

2.—Protection and Improvement.

154. One person was prosecuted for selling timber obtained under a free permit; but the case was dismissed, and the judgment questioned the legality of the notification No. 33F. of 1876. One Moung Tha Doon was convicted of the theft of a teak log, and fined Rs. 10; and another, Moung Koon, was condemned to four months' rigorous imprisonment for issuing false trade permits.

Prosecutions and breaches of forest rules.

3.—Yield and Working.

Out-turn of year.

155. (*a*) *Timber extracted by departmental agency.*—Four hundred and fifteen teak logs have been delivered at the Rangoon Timber Depôt at a cost of Rs. 3,794-8-0, of which Rs. 122-14-0 are still due to the contractor. There is so little dead and girdled timber in this division and that of such inferior quality, that the work hardly supports two contractors.

Elephant establishment.

156. There are at present three elephants in this division.

Girdling operations.

157. Two thousand teak trees have been girdled in the Pegu forests north of the Kodoo-gweh choung at a cost of Rs. 400. One thousand and thirty-four of these trees were selected by Mr. Carter on the Teh-daw stream and 966 were on the Sin-zweh stream. Only such trees were selected as would yield 1st class doogyees or other timber fit for export. The trees have been selected with great care as regards facilities of export as well as the future conservancy of the forest.

Drift timber.

158. Twenty-seven logs of teak were salved on the Hlaing river, and delivered at the Rangoon Timber Depôt at a cost of Rs. 53-8-0.

Extraction of timber by purchasers.

159. (*b*) *Timber and other forest produce extracted by consumers and purchasers.*—One hundred and fifty-two small pieces of teak refuse and 20 small teak posts were extracted by purchasers, yielding a revenue of Rs. 857.

Extraction of timber of reserved kinds under trade permits.

160. During the year trade permits were issued for 9,231 trees of the reserved kinds, the permit fees amounting to Rs. 2,948-12-0. The following statement shows the different kinds of trees, for which the permits were issued :—

Range.	In.		Pyin-ma.		Pyingado		Kanyin.		Thingan.		In-gyin.		Thitya.		Anan		Total Logs.	Total Revenue.
	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P.
Hlaing ..	5,474	1,368 8 0	398	99 8 0	311	155 8 0	117	58 8 0	8	4 0 0	12	6 0 0	10	5 0 0	..	....	6,330	1,697 0 0
Pounglin ..	..	....	363	90 12 0	35	17 8 0	37	18 8 0	19	9 8 0	3	1 8 0	..	....	1	0 8 0	458	138 4 0
Pegu ..	..	....	1,166	291 8 0	207	103 8 0	1,008	504 0 0	62	31 0 0	..	....	..	....	..	....	2,443	930 0 0
Total ..	5,474	1,368 8 0	1,927	481 12 0	553	276 8 0	1,162	581 0 0	89	44 8 0	15	7 8 0	10	5 0 0	1	0 8 0	9,231	2,765 4 0

During the year, 10,580 logs were extracted and passed revenue stations, yielding Rs. 19,485-7-1. The following statement exhibits the number of each kind extracted :—

Range.	In.		Pyin-nna.		Pyingado.		Kanyin.		Thingan.		In-gyin.		Anan.		Thitka.		Thitkado.		Total Logs.	Total Revenue.
	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P.	No.	Rs. A. P.
							Logs extracted on permits of previous year.													
Hlaing ...	1,010	1,695 6 7	23	18 8 3	.....		188	811 9 9	...	...	60	35 13 9	...	...	...	...	...	...	1,281	2,561 6 4
Pounglin ...	...	.....	290	424 8 6	26	46 9 6	246	791 2 0	13	13 3 0	5	10 1 9	8	15 2 0	10	30 4 6	3	10 14 9	603	1,342 14 0
Pegu ...	...	.....	331	426 14 6	83	51 1 0	569	244 5 3	...	...	...	...	...	...	...	...	...	...	983	722 4 9
							Logs extracted on permits of this year.													
Hlaing ...	4,876	5,346 9 6	546	559 7 9	209	531 1 6	192	904 13 3	6	9 12 3	...	...	...	...	...	...	...	...	5,829	7,353 12 3
Pounglin ...	...	.....	392	587 4 0	45	73 12 9	133	639 9 0	8	42 5 0	3	15 3 3	1	5 6 0	...	...	...	...	581	1,363 8 0
Pegu ...	...	.....	525	597 15 3	30	16 12 6	736	3,162 5 3	12	104 11 9	...	...	...	...	...	...	...	...	1,303	3,851 12 9

161. The number of logs of the reserved woods extracted in the Rangoon division, and the revenue derived therefrom, are yearly diminishing, which is however fully explained by the following statement, which exhibits the timber of other non revenue-paying kinds which pass the Rangoon revenue stations.

Increased consumption of timber of the unreserved kinds.

As many as 22,708 logs of these species have passed the Awaing, Pounglin, and Taw-la-teh stations alone, showing an annual increase in the consumption of these woods.

Annual statement of timber which passed the Rangoon revenue stations free of revenue during 1879-80.

Name of Station.	Koungmoo.	Zin-byoon.	Ouk-choung.	Ban-bway.	Zin-yan.	Tharapoo.	Myouk-thway.	Thabyay.	Sit.	Mone-daing.	Chin-yoke.	Myalagwin.	Touk-sha.	Yamanay.	Naboh.	Binga.	Ma-oo.	Myouk-chaw.	Myah-yah.	Pono-meh-za.	Tha-yet.	Toung-peing-neh.	Sake-kyoo.	Hlwa-nee.	Toung-baing.	Soke-pyoon.	Laing.	Pan-ga.	Teing.	Pet-woon.	Touk-kyan.	Hlweh-bouk.	Kyet-yo.	One-neh.	Wa-boot-gyoo.	Ngoo.
Awaing ...	5	1,818	869	32	36	...	...	6	...	...	...	...	...	19	8	1,568	115	67	8	8	30	347	464	163	...	...	263	...	559	492	124	10	19	...	23	229
Pounglin ...	...	1,404	106	464	922	389	21	215	182	86	30	222	332	31	12	679	299	58	200	3	348	...	...	151	34	15	141	9	...	108	25	63	52	8	17	24
Taw-la-teh ...	...	...	...	...	...	...	...	54	...	...	...	...	...	...	...	...	...	...	...	...	4,412	...	...	...	...	...	...	...	912	...	...	...	...	...	...	...
Total ...	5	3,222	975	496	969	389	21	275	182	86	30	222	332	50	20	2,247	414	125	208	11	4,790	347	464	314	34	15	404	9	1,471	600	149	73	71	8	40	253

Annual statement of timber which passed the Rangoon revenue stations, &c.—(concluded).

Name of station.	Shaw-nee.	Myouk-sake.	Na-ta.	Thit-magyee.	Teing-kala	Na-gyeh.	Yazawa.	Yindike.	Ba-moo.	Nalin-gyaw.	Pet-leh-zeo.	Thit-seing.	Koo-than.	Tha-dee.	Tha-doot.	Teing-thay	Thit-nee.	Poke-thin-ma Myet-kouk.	Onedoon-po.	Zaw-gyee-oke-toke.	Na-sha-gyoo.	Sin-yay-mono.	Tha-deema.	Total.	Bamboo.	Canes.	Shaw.	Saloo.	Thet-keh.	Toung-than.
Awaing ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	15	6	...	...	2,312,818	2,287	38,000	975,590	99,350	82,200
Pounglin ...	1	26	12	69	2,016	81	118	216	31	92	125	23	3	40	13	429	12	20	20	27	...	...	1	...	179,456	2,350	...	1,450	...	...
Taw-la-teh ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3,569,000	...	...	...	...	...
Total ...	1	26	12	69	2,016	81	118	216	31	92	125	23	3	40	13	429	12	20	20	27	15	6	1	22,708	6,061,274	4,637	38,000	977,040	99,350	82,200

Revenue in minor forest produce.

162. Rupees 360 were realized for permits for fire-wood and charcoal of minor forest produce, Rs. 476-14-0.

4.—Financial Results.

Receipts and expenditure.

163. The revenue of the year amounted to Rs. 24,278-11-3 and the expenditure to Rs. 49,300-14-4, showing a deficit of Rs. 25,022-3-1.

From this however has to be deducted the sum realized by the agency office on account of the division amounting to Rs. 9,735, leavinga deficit of Rs. 15,287-3-1.

D.—TOUNGOO DIVISION.

2.—Protection and Improvement.

Prosecutions and breaches of forest rules.

164. A sawyer, Moung Oke, was fined Rs. 50 for cutting up a log of foreign timber before it had been reported, and when again convicted of the same offence was fined Rs. 200. One man was prosecuted on the charge of forging a forester's signature to a report of arrival of timber under which money was advanced to him. The case happened four years ago, and the man remained *perdu* in Upper Burma, but was apprehended on his return, tried, convicted, and sentenced to one year's imprisonment. He was however released by the Judicial Commissioner.

3.—Yield and Working by Government Agency.

Out-turn of year.

165. The following table, from which it will be seen that 4,318 logs of teak and 316 of thitka were extracted by Government contractors, at a cost of Rs. 47,940-7-11, shows the out-turn of each forest :—

Name of forest.	Number of logs.	Cost of timber.	Average per log.
		Rs. A. P.	Rs. A. P.
Bone-doung	290	3,929 12 0	13 8 9
Ka-boung	655	9,053 11 7	13 4 11
Pyoo	362	4,663 0 9	12 14 1
Swa	139	1,240 2 1	8 14 8
Thaing	785	7,102 1 7	9 0 3
Yaynee	4	92 0 0	23 0 0
Myo-hla	29	41 14 0	1 7 1
Koon	2,054	18,377 10 7	8 15 1
Thitka	316	3,442 1 8	10 14 3
Total ..	4,634	47,942 6 11	..
C. R. of S. P. ..	....	1 15 0	..
Deduct 487 small pieces	....	47,940 7 11	..
From Swa and Thaing, sold at Toungoo	437	1,849 10 0	..
Value of timber sent to Rangoon	....	46,090 13 11	..

The balance of account due of 2,040 logs, for the delivery of which credit had been taken last year, was paid during the year, amounting to Rs. 24,192-15-5.

Drift timber operations in Sittang river.

166. Six thousand three hundred and twenty-one teak drift logs, mostly from Upper Burma, were salved and brought into depôt. Of these, 5,755 were returned to claimants, 456 were carried off by a flood from the Toungoo depôt, and 111 were sold as waif.

	Rs.	A.	P.
The cost of drift timber operations in the Sittang division amounted to ..	8,212	9	7
And the income derived under this head to	21,969	14	0
Yielding a surplus of	13,757	4	5

Disposals of timber.

167. During the year 4,342 logs were despatched to the Rangoon Central Depôt; 437 inferior teak logs were sold at Toungoo, realizing Rs. 3,699-4-0.

Girdling operations.

168. Girdling has been carried on the Kyouk-masin, Pa-beh, and Thaing forests. The portion of the forest selected for girdling on the Thaing and Pa-beh falls outside the scheme of reserves in those valleys, and every 1st class tree, yielding good marketable timber, and deemed easily accessible, was girdled in that part over which the Government operations extended. In the Kyouk-masin, a forest which will be proposed as a reserve, the girdling operations have been carried out by Mr. Nisbet, on the principle of selection, with a view to interfere as little as possible with the reproductive and conservative interests of the forest. By the 31st March 137 trees had been girdled in the Pa-beh and Choung-man-geh, 4,182 in the Kyouk-masin, and 114 in the Thaing. The work of girdling, not being completed by the end of the year, will be treated of *in toto* in the next year's report.

Extraction of timber of reserved kinds under trade permits.

169. During the year 264 trade permits were given for—

	Logs.
Thingan	1,314
Padouk	19
Thitsee	4
Pyingado	27
Kanyin	1
In	74
Total ..	1,439

realizing Rs. 6,590, showing an increase of Rs. 2,282 over last year; Rs. 2,405-8-0 were also realized by the civil authorities.

Free permits.

170. Nineteen thousand two hundred and sixty-one trees of the reserved kinds were given on free permits by the civil authorities, as the following statement will show :—

Tike.	Thingan.	Thitsee.	Koke-ko.	Padouk.	Pyingado.	Anan.	Thitya.	In-gyin.	In.	Pyin ma.	Kanyin.	Sha.	Thitka.	Mixed.	Total.
Tha-ga-ra ..	..	..	..	20	1,230	..	953	97	1,708	1,048	..	9	..	105	5,170
Za-ya-wa-dee ..	..	..	..	10	809	..	319	12	326	1,430	..	..	..	21	2,927
Bone-ma-wa-dee	..	5	..	45	1,646	..	1,296	630	2,255	840	10	93	10	259	7,089
Myoma ..	..	..	..	41	528	14	850	94	1,886	489	..	..	..	..	3,882
Kan-nee ..	..	..	..	..	90	..	87	5	18	37	..	..	..	6	193
Total ..	..	5	..	116	4,303	14	3,485	838	6,193	3,844	10	102	10	391	19,261

This is upwards of 6,000 trees more than last year.

Non-observance of free permit rules.

171. The working of the rules for the issue of free permits in the hands of the Extra Assistant Commissioners has evidently again been much abused, as the accompanying statement shows :—

Thitka	10
Padouk	116
Thitsee	5
Anan	14
Kanyin	10
Cutch	102

This is against the orders of Government, and the Deputy Commissioner has issued a warning to the Extra Assistant Commissioners that they will be deprived of their power in regard to the issue of these permits if they continue to disobey these rules.

4.—Financial Results.

Receipts and expenditure in Sittang division.

172. The expenditure of the division amounts to Rs. 1,07,919-4-4, and the revenue Rs. 35,166-6-6, as per form 49. To the revenue however has to be added Rs. 1,59,547-12-2 realized by the agency office on account of the division; and to the expenditure the sum of Rs. 7,609-14-3, spent on account of pay, allowance, &c., of Demarcation Staff by the agency office.

E.—SHWAY-GYIN DIVISION.

2.—Protection and Improvement.

Prosecutions and breaches of forest rules.

173. One person was prosecuted for cutting a toungya in teak localities and fined Rs. 25; four villagers of Koungbin-zake were prosecuted for felling 24 small teak trees near their village. One of them was fined Rs. 50, and the remaining three Rs. 25 each. One other villager was prosecuted for felling a few small teak trees; but the case was dismissed. One person was fined Rs. 5 for making charcoal without a permit. A resident of Shway-gyin was in possession of a teak boat-hull bearing Upper Burma forest marks, but had neither the import mark nor pass, thus proving that it had not been reported as required under the forest rules. His boat-hull, worth some Rs. 150, was confiscated by the Deputy Commissioner as a warning to others.

Communications.

174. Houses were erected for the depôt establishment at Myit-kyo and Ma-douk, and a hut was built for the elephant establishment at Shway-gyin. The cost of the former amounted to Rs. 114-4-0 and of the hut to Rs. 25.

3.—Yield and Working by Government Agency.

Out-turn.

175. Twenty-five teak logs were brought out from the Mone forest; and 183 kanyin logs were delivered at Rangoon under the half-profit principle.

Drift timber.

176. The balance of drift timber on the 31st March 1879 was 226 logs. During the year under review; 1,280 logs were salved, consisting of—

Teak	1,190
Thitka	88
Pyin-ma	2

Of these, 1,023 were made over to claimants, eight were sold locally, and the balance on hand is 475. The drift timber operations cost Rs. 2,546-14-11 and yielded Rs. 3,686-8-0, giving a surplus of Rs. 1,139-9-1.

Disposals of timber locally.

177. During the year—

	Rs.
Eight small refuse teak logs were sold for	670
One teak log	44
Six kanyin	80
Two pyingado	8

Contractors.

178. Only one contractor was employed in the division during the year.

Elephants.

179. Two elephants are attached to the division.

Trade permits for timber of reserved kinds.

180. The following table exhibits particulars regarding trade permits issued during the year. Permits were issued for 1,835 trees; and the revenue amounted to Rs. 3,360:—

Number of permits issued.	Number of trees.							Total.	Remarks.
	Thingan.	Koke-ko.	Pyingado.	Padouk.	Anan.	In.	Pyn-ma		
221	104	6	667	4	2	15	1,037	1,835	

Revenue on minor forest produce.

181. The revenue on minor forest produce amounted to Rs. 1,634, of which Rs. 765 are for charcoal permits and Rs. 869 for the extraction of thitsee and kanyin oil.

4.—Financial Results.

Receipts and expenditure.

182. The revenue collected during the year under review amounts to Rs. 10,008, against an expenditure of Rs. 14,856. Thus, form 49 shows a deficit of Rs. 4,848 ; but the agency office realized on account of the division Rs. 7,775-8-0, thus leaving the division with a surplus of Rs. 2,926-8-0.

F.—WESTERN DIVISION.

2.—Protection and Improvement.

Prosecutions and breaches of forest and revenue rules.

183. During the year seven prosecutions were instituted by the department for breaches of forest rules ; but, of these, three cases were dismissed ; one person was convicted for breach of notification No. 33, and fined Rs. 30 ; two persons were convicted under the Indian Penal Code, sections 109, 170, and 419, and condemned ; one to six months' imprisonment and a fine of Rs. 100 ; and the other to six months' imprisonment. Two persons were prosecuted for breach of Notification No. 33 ; one was condemned to a fine of Rs. 100-8-0, or three months' imprisonment ; the other to a fine of Rs. 54, or one month's imprisonment. One man, Buker Ali, was prosecuted under sections 109, 170, and 412 of the Indian Penal Code and fined Rs. 200.

3.—Yield and Working.

No teak timber extracted.

184. *(a) Timber extracted by Government agency.*—No teak timber was brought out during the year ; but a contract has been entered into for the extraction of 200 logs during the present year.

Extraction of timber of other kinds.

185. During the year, 78 logs of kathit (thitka) were extracted from the Western forests and brought to the Bassein Timber Depôt at a cost of Rs. 415-4-6. Of the previous year's extraction, 174 logs of woods of other kinds were delivered at the Rangoon Timber Depôt. New contracts have been entered into for the extraction of woods of other kinds.

Disposal of timber.

186. During the year 647 logs were sold in the Bassein Timber Depôt and in the district, realizing Rs. 5,207-5-9.

Drift timber operations.

187. During the year 376 logs of teak were salved and sold, as well as three drift logs of inferior timber. The amount realized was Rs. 8,583-4-11 ; and the cost of drift timber operations amounted to Rs. 2,704-7-11.

Elephant establishment.

188. Two elephants are attached to this division ; but one of them has been laid up several months with sore feet.

Extraction of timber of reserved kinds under trade permits.

189. *(b) Timber removed by purchasers.*—Under this heading Rs. 8,474-12-5 were realized.

The following statement shows the number of trade permits issued during the year :—

District.	Thingan.	Pyingado.	In-gyin.	Thitya.	Sha.	Kanyin.	In.	Pyin-ma.	Kashit.	Total.
Bassein	2	1,816	..	..	..	..	65	130	10	2,023
Henzada	..	539	20	10	81	10	638	100	..	1,398
Total ..	2	2,355	20	10	81	10	703	230	10	3,421

Revenue on minor forest produce.

190. The revenue from charcoal realized Rs. 667-13-0 and from cutch Rs. 932.

Free permits for trees of reserved kinds.

191. The following statement shows the number and various kinds of reserved trees given under free permits during the year :—

District.	Thingan.	Thitsee.	Koke-ko.	Pyingado.	Anan.	In-gyin.	Thitya.	Sha.	Kanyin.	In.	Pyin-ma.	Total.
Bassein	2	..	..	2,771	41	51	34	10	..	19	151	3,079
Henzada	..	..	..	Not received.						..	..	..

Free permits for timber of unreserved kinds.

192. Subjoined is also a list of free permits granted by Civil Officers for timber of the unreserved kinds in the Bassein district, showing a total of 17,067 trees.

Bassein	District.
1230	Choung-douk.
1,540	Kyoon-bo.
580	Tha-yet.
2,785	Penebo.
200	Kyanan.
1,225	Kyet-too-yway-sa.
364	Toung-baing.
3,372	Thabyay.
490	Petwoon.
15	Myouk-shaw.
610	Tha-ya-pee.
170	Toungsagaing.
480	Kambala.
460	Ka-nyoung.
345	Thitpo.
55	Thitbya.
495	Deedoo.
340	Toung-kyan.
695	Thitpoke.
85	Toungsaga.
100	Ouk-chin-za.
25	Na-beh.
60	Talaing-goung.
6	Myouk-goung.
20	Thitwa.
110	Ma-nee-aw-ka.
25	Pan-moke-gone.
25	Bammaw.
450	Myouk-wa.
310	Ko-keh.
50	Goon-one.
250	Loon-ngoke-hatta.
80	Nasha.
20	Ka-nay-thway.
50	Sa-o-ya.
17,067	Total.

This statement is interesting from a statistical point of view, as it shows the large consumption of trees of the unreserved kinds.

4.—Financial Results.

Receipts and expenditure.

193. The Western division, as per statement 49, exhibits an income of Rs. 21,000-3-11, against an expenditure of Rs. 18,058-13-1. To the above income however must be added Rs. 3,542, realized by the agency office on account of the division, thus showing a net income of Rs. 6,483-6-10.

RANGOON AGENCY AND CENTRAL TIMBER DEPÔT.

2.—Improvements.

Depôt communications improved.

194. The main road to the Government Timber Depôt was repaired at a cost of Rs. 303. Bridge No. 2, over the office creek, was reconstructed at a cost of Rs. 51-6-9; and Rs. 38-8-0 were expended in petty repairs to other bridges. The buildings of the Government Timber Depôt at Kemmendine were repaired, at a cost of Rs. 651-4-9. Rupees 127-10-0 were expended in clearing out creeks Nos. 1 and 2 and in levelling some ground at the Government Timber Depôt.

3.—Working.

Working of the depôt; balance at commencement of year.

195. The balance of timber in hand on the 1st April 1879 was—

Teak.

Logs.		Crooks.	Sleepers.	Tons.
1st class.	2nd class.			
2,983	6,953	....	85	9,527

Woods of other kinds.

Logs.	Sleepers.	Tons.
159	864	125

Arrivals at the depôt.

196. The arrivals of timber from the different divisions during the year, as exhibited in form No. 55, are—

	Tharrawaddy	11,825	
	Rangoon	416	
	Toungoo	4,342	
	Shway-gyin	858	
	Prome	3,708	
	Henzada	174	
Drift timber	Agency	505	
	Henzada	204	
			21,532
Add scantlings in number	.. .. ..		315
	Total ..		21,847

These arrivals are taken stock of, as shown in the following statement :—

Teak.

Logs.		Crooks.	Sleepers.	Tons.
1st class.	2nd class.			
2,612	18,283	....	....	18,840

Woods of other kinds.

Logs.	Scantlings.	Tons.
637	315	535

197. The number of logs, sleepers, bamboos, &c., disposed of during the year, and the sums realized thereon, as exhibited in form 57, are—

Disposals.

	No.	Rs.	A.	P.
Auction sale	16,253	4,40,771	0	0
Indent sale	657	42,030	9	4
Bamboos	120	8	8	0
Canes	18	18	0	0
Scantlings	315	107	10	0
Sleepers	31	13	0	0
Drift timber	501	8,285	0	0
Ditto to claimants	364	1,624	10	0
Tusks	..	262	11	0
Experimental purposes	18	....		
Total ..	18,277	4,93,121	0	4

Teak.

Logs.		Crooks.	Sleepers.	Tons.
1st class.	2nd class.			
4,191	12,826	....	6	16,945

Woods of other kinds.

Logs.	Sleepers.	Scantlings.	Tons.
776	25	315	635

198. From the above, it will be seen that the average price realized per log amounted to Rs. 28-8-9 or Rs. 30-6-7 per ton. These figures, if compared with the previous year's report, again show a falling off. The timber trade was as depressed as it possibly could be, and a large quantity of inferior wood was brought into the market. Purchases by indent have been very limited during the year. Since November the timber trade has revived.

Average prices realized.

199. The following table shows the amount and kind of timber sold by the agency office on account of the different divisions :—

Timber disposals according to divisions.

Division.	Description of timber.	Number of pieces.	Amount.
			Rs. A. P.
Prome ..	Teak logs	3,796	99,216 3 5
Tharrawaddy ..	Teak logs	6,973	2,13,216 15 5
	Woods of other kinds	6	84 0 0
	Teak sleepers	6	1 8 0
	Total ..	6,985	2,13,302 7 5
Rangoon ..	Teak logs	80	3,087 13 6
	Pyingado sleepers	25	11 8 0
	Total ..	105	3,099 5 6
Toungoo ..	Teak logs	4,927	1,48,960 5 6
	Woods of other kinds	475	9,595 3 6
	Looza scantlings	263	77 3 2
	Drift timber	75	915 0 0
	Total ..	5,740	1,59,547 12 2
Shway-gyin ..	Teak logs	376	5,192 0 0
	Woods of other kinds	121	2,575 0 0
	Bamboos	120	8 8 0
	Total ..	617	7,757 8 0
Western ..	Woods of other kinds	174	874 0 0
	Drift timber	155	2,668 0 0
	Total ..	329	3,542 0 0
Agency Office ..	Thitka scantlings	52	30 6 10
	Canes	18	18 0 0
	Drift timber	271	4,702 0 0
	Total ..	341	4,750 6 10

200. The balance of timber in hand at the Government Timber Depôt, at the close of the official year is as follows :—

Balance at close of year.

Teak.

Logs.		Crooks.	Sleepers.	Tons.
1st class.	2nd class.			
1,404	12,410	..	79	12,422

Woods of other kinds.

Logs.	Sleepers.	Tons.
20	339	25

The timber has only been valued at Rs. 26, as the greater portion of the timber out-turn from the forest this year had to be placed in the 2nd class. The valuation is consequently much lower. The following table shows the amount of timber in hand on account of the several divisions at the close of the year :—

Division.	Teak logs.	Logs, woods of other kinds.	Teak sleepers.	Pyingado sleepers.	Total.
Tharrawaddy	12,008	....	....	....	12,008
Rangoon	375	....	....	339	714
Prome	....	15	....	....	15
Toungoo	1,423	5	....	....	1,428
Agency Office	....	....	79	....	79
Total ..	13,806	20	79	339	14,244

4.—Financial Resnlts.

Expenditure and revenue credited to the different forest divisions.

201. The agency and depôt were kept up at an expenditure of Rs. 67,797, and Rs. 2,687 were spent on salving logs. The revenue realized has been credited as follows :—

	Rs.	A.	P.
Prome, ...	99,216	3	5
Tharrawaddy	2,13,302	7	5
Rangoon	3,099	5	6
Sittang	1,59,547	12	2
Shway-gyin	7,775	8	0
Western	3,542	0	0
Agency	4,750	6	10
GRAND TOTAL ..	4,91,233	11	4

TENASSERIM CIRCLE.

A.—SALWEEN DIVISION.

1.—Area and Boundaries.

No State reserves.

202. This division contains no State reserves, portions of it having been formed into separate divisions, in which all existing reserves are situate.

B.—EAST SALWEEN.

State reserves.

203. The East Salween division contains the Meh-pulleh reserve, 20 square miles in extent, and no addition to the area of State reserves has been made during the year. The boundaries of the Meh-pulleh reserve were examined during the year by Mr. Bingham, and carefully and thoroughly cleared. Many of the smaller demarcation boards were found split.

Preliminary demarcation.

204. The following forests in the Middle Thoung-yin district were examined by Mr. Phayre on the part of the Civil Department, accompanied by Mr. Bingham as Forest Officer :—

	Square miles.
Ka-maw-kala	9
Meh-palch, East	60
Mek-ka-neh	30
Kyouk-ket	19
Meh-gala	10
Total ..	128

Proposals have been submitted to constitute the above forests State reserves. The cost of the selection of these reserves amounts to Rs. 1,328, exclusive of pay and travelling allowance of the officers in charge of the work.

Preliminary examination and selection of reserves.

205. The forests on the Upper Thoung-yin were examined by Mr. Thellusson, and an area of about 150 square miles has been selected for next season's work of the Demarcation Staff.

2.—Protection and Improvement.

No works of improvement undertaken.

206. No fire-protection or other improvements took place in this division, the time of the Divisional Officer being taken up with demarcation and timber work.

C.—WEST SALWEEN DIVISION.

1.—Area and Boundaries.

State reserves.

207. The following is a list of State reserves in the West Salween division in the beginning of the year under review :—

	Square miles.
Sin-zweh	14
Wa-moo choung	3
Ka hee-loo	15
Meh-waing	13
Meh-nan-nweh	6
One-kan-gyee	13
Beela-kat-gyee	13
Tageh-loung	8

During the year, no new reserves were sanctioned.

Inquiry into toungya rights in Meh-waing, Meh-nan-nweh, and Ka-hee-loo reserves.

208. By order of the local Government, the Ka-hee-loo, Meh-waing, and Meh-nan-nweh reserves were visited by Mr. Davis, Assistant Commissioner at Pa-poon, with reference to rights of toungya cultivation over these areas. As regards the Ka-hee-loo reserve, the Civil Officer, who was accompanied by Mr. Ward, ascertained that no toungya rights existed, and that no alteration in boundaries was called for; but, in the case of the Meh-waing and Meh-nan-nweh reserves, he has proposed payment of compensation and a slight modification in the east boundary of the former, and either compensation or a considerable reduction in area of the latter.

Examination of areas suitable for reservation.

209. Consequent on the rapid destruction of the Upper Salween teak localities by toungya cultivation, Mr. Aplin was specially deputed in March to the examination of the Upper Salween forests. Owing to the lateness of the season, it was only possible to examine the tracts drained by the Meh-tha-louk and its tributaries, and embracing an area of about 160 square miles.

Upper Salween forests injured by toungya cultivation.

210. Except in very rocky, precipitous localities, no portion of these valuable forests was found to have escaped injury at the hands of toungya cultivators. A carefully detailed map is in course of preparation, and proposals will be submitted for the reservation of an area of about 30 square miles, subject to payment of compensation for rights of toungya.

2.—Protection and Improvement.

Teak toungya plantations in Sin-zweh reserve.

211. *(a) Planting teak in toungyas.*—In the Sin-zweh reserve 356 acres of teak toungyas were planted by the Karens during the year but the Divisional Officer reports the result as unsatisfactory, consequent on the early rains in April interrupting the burning of the toungyas. There being reason to doubt the correctness of the countings, no payment will be made for the teak plants until another counting has been made at the close of the next rains; 153 acres of toungyas have been cleared for teak cultivation during 1880-81; but the heavy early rains having again prevented a satisfactory burn, everything will depend upon the ability of the Karens to keep down the rank growth of weeds, &c., which is the result of an imperfect burn, and always seriously affects the cultivation in hand. The attention of the Divisional Officer has been specially directed to this; but it must be borne in mind that these Upper Salween and Frontier Karens are very independent and much more difficult to manage than those elsewhere in the province. All the toungya plantations of the three previous years, comprising an

area of 210 acres, were weeded by the Ka-moo cooly establishment. The total expenditure on weeding and taxes amounted to Rs. 933-7-1, inclusive of 475-13-6, the cost for six months of a Ka-moo establishment of one goung and six coolies.

Labour difficult to obtain.

212. The difficulty of procuring labour necessitated the entertainment of these men from the borders of Cambodia. They were paid at the rate of Rs. 70 per annum per cooly and Rs. 80 for the headman, and had to be supplied with rations.

Teak toungya plantations in Meh-nan-nweh reserve.

213. The area of teak toungyas in the Meh-nan-nweh reserve planted during the year amounted to about 36 acres, but, for reasons similar to those noted in the case of the Sin-zweh plantation, no results were obtained. Some of these clearings however fall within the area likely to be excluded in the rectification of the east boundary: for next year's operations 25 toungyas have been cut.

Teak toungya plantations in Meh-waing reserve.

214. In the Meh-waing reserve the Karens planted about 22 acres of teak toungya, and the countings showed 4,219 plants, or an average of 191 plants per acre. The amount paid was Rs. 33-7-0. For next year's planting 21 toungyas are reported to have been prepared.

Teak toungya plantations in Ka-hee-loo reserve.

215. In the Ka-hee-loo reserve nine toungyas, aggregating 16 acres, were cut, eight of which were planted with teak seed and one with thitka. Eighty seedlings of thitka were successfully raised on 1½ acres; one acre of teak sowing proved an entire failure; and the remaining 13½ acres were found to contain at the time of counting 2,859 plants, or 220 plants per acre. The amount paid was Rs. 20-2-0. For next year's operations 12 toungyas, aggregating about 24 acres, were felled.

Teak toungya plantations in Wa-moo reserve.

216. In the Wa-moo reserve only one toungya of 1½ acres was cut and planted with teak, but, on account of destruction done by buffaloes entering the reserve, only 225 plants could be found. No money was paid for these plants, and the Assistant Conservator has been requested to take measures against owners of cattle after duly warning them. Twelve toungyas have been prepared for planting in 1880-81, aggregating some 24 acres.

Teak toungya plantations in One-kan-gyee reserve.

217. In the One-kan-gyee reserve three toungyas were sown with teak, aggregating about 3½ acres; but the results were unsatisfactory. For next season's operations three toungyas have been prepared.

Protection from fire in Sin-zweh reserve.

218. The Sin-zweh reserve, containing 8,960 acres, was successfully protected during the year, with the exception of about 100 acres of open grass-land contiguous to the west boundary, which ignited when some toungyas outside the reserve were set on fire after the close of the official year. The outer fire-trace, 50 feet wide and eight miles long from the Old Yoo-po village along the south and east boundaries to the mouth of the Koon stream, was recut and burnt, at a cost of Rs. 136, for five miles; the remaining three miles were cut by the Ka-moo cooly establishment hired for the year. Two inner fire-traces, respectively 30 and 50 feet in width, and 4½ and 1½ miles in length, were also recut and burnt at a cost of Rs. 94-8-0; and two additional inner fire-traces 50 feet wide, and in all seven miles in length, were cut and burnt at a cost of Rs. 230. The total cost amounted to Rs. 514; but to this has to be added Rs. 475-13-6 as payment, &c., of Ka-moo cooly establishment.

Fire-protection in Meh-nan-nweh reserve.

219. The Meh-nan-nweh reserve, containing 3,840 acres, was protected from fire at the small cost of Rs. 3, its protection being in a great measure secured by natural fire-resisting lines, such as the Beelin river and its tributary, the Meh-nan-nweh on the west and south and by the Pa-poon and Shway-gyin high roads on the east and north, these roads being kept clear by the Civil Department. The only fire-trace that has to be cut is from the Bodat choung, where it cuts the Pa-poon high road to the mouth of the Wat-ka-law stream, and thence to the Shway-gyin high road. This work is seen to by the Karens engaged in planting

teak, who are also responsible for general protection against fire; and this obviates the necessity for entertaining separate watchers.

Fire-protection of Meh-waing reserve.

220. The fire-protection of the Meh-waing reserve, 8,320 acres, by the local forester, assisted by the Karens, was also successful. A fire-trace, about nine miles in length and 10 feet broad, was cut by the villagers at a cost of Rs. 34.

Fire-protection of Ka hee-loo reserve.

221. Of the Ka-hee-loo reserve, 1,280 acres were protected by the local forester at a small cost, the expenditure being limited to Rs. 30 for a fire-trace along a path nine miles in length and to Rs. 30 for watching. The remaining portion of this reserve being evergreen forest needed no protection.

Fire protection of Wa-moo reserve.

222. From the Wa-moo reserve, 1,920 acres, fire was successfully excluded by the local forester by a single fire-line, about half mile in length and 18 feet broad on the south side, at a cost for cutting, &c., of Rs. 10.

Fire-protection of Doom-da-mee reserves in One-kan-gyee, Bee-la-kat-gyee, and Tageh-loung.

223. The southern portion of the One-kan-gyee reserve, 4,160 acres in extent, was successfully protected by the local forester, assisted by the Karens, at a cost of Rs. 47. The northern portion of the Beela-kat-gyee reserve, lying north of the Kya-thoung-zake and Old Shway-paw path, and about 3,000 acres in extent, was also successfully protected by the Karens located in the reserve. No payment had been made to them within the year.

Nothing was undertaken departmentally for the protection of the Tageh-loung reserve, experience having shown that this could not be effected except at great expense and with a larger control establishment, unless the good will and united assistance of the villagers in the vicinity could be reckoned upon, the reserve being shut in on the west by a broad belt of kaing or elephant grass several miles in extent, through which fires sweep with great force every hot season when high winds prevail from south and west.

The undulating nature of the ground and hollows in which the grass will not burn till very late in the hot season preclude an early and effectual burn of the whole area without which protection becomes next to hopeless.

Tageh loung reserve not entered by fire owing to early heavy rains.

224. The reserve was not however entered by the jungle fires this past season, the heavy rains for three days in April having enabled the villagers to protect the entire area.

Breaches of forest rules.

225. Five Shans were prosecuted before the Assistant Commissioner of the Salween district for cutting toungyas within the Wa-moo reserve, but were acquitted on proving that they had obtained the permission of the late forester.

D.—ATTARAN.

1.—Area and Boundaries.

State reserves.

226. Up to the beginning of the year under review the following forests had been constituted State reserves within this division:—

	Estimated area.
Da-lee	12
Pa-ka-bo	32
Kyoon choung	17
Ma oo	14
Thingan-nyee-noung	9
Meh-gwa	19
Goon-gyee	43

Addition to area of State reserves.

227. During the year the Nat choung forest, of an estimated area of nine square miles, was constituted a State reserve by notification No. 18, dated the 25th February 1880.

227*a*. The Nat choung State reserve was finally demarcated by cut lines 12 feet in width, wherever the boundary was not constituted, by roads, creeks, or other natural features, and by boundary boards at about every 100 yards.

Final demarcation.

The cost of the demarcation amounted to Rs. 25-4-0, exclusive of the cost of boundary boards, 283 of which were used.

228. All the artificial boundaries of the reserves were inspected by Mr. Aplin, and re-cleared wherever necessary. In the Da-lee, the lines were found much obstructed by fallen trees, the result of violent winds in July.

Examination of boundaries.

2.—Protection and Improvement.

229. *Fire-tracing.*—The Kyoon choung reserve was fire-traced at a cost of Rs. 114 for fire-traces 25 feet in breadth and aggregating 12 miles in length. Fires were successfully kept out of the whole of the reserve during the dry season; but, just before the rains, a fire crossed the lines, and spread over about 30 acres before it could be extinguished.

Fire-protection of Kyoon-choung reserve in Attaran district.

230. Of the Da-lee reserve, the portion embracing the small teak plantation, 46 acres, and some teak tracts, an area in all of about 800 acres, was successfully protected by the forester in charge until late in the season, when it was reported to have been maliciously set on fire, and the entire area, except 11 acres of the teak plantation, was burnt. The investigation into the matter has not yet been concluded; but there is no doubt that the locality is the resort of elephant-thieves and escaped dacoits from the frontier, such characters being occasionally encountered by the forest subordinate in his rounds.

Fire-protection unsuccessful in Da-lee reserve.

E.—SOUTH TENASSERIM DIVISION.

1.—Area and Boundaries.

231. No actual reserves have been taken up in this division; but, as already reported last year, an area of 43 acres near Mergui was selected and taken possession of for experimental cultivation.

Area acquired for plantation purposes near Mergui.

2.—Protection and Improvement.

232. The eight India-rubber plants (*Hevea braziliensis*) planted in the forest office compound are thriving, and have attained the following dimensions:—

Cultivation of *Hevea braziliensis* at Mergui.

Height.		*Diameter at one foot from the ground,*—
Feet.	Inches.	Inches.
30	..	2·75
22	..	2·25
18	6	2·00
13	10	1·50
13	..	1·50
11	2	1·25
5	7	1·25
8	7	1·50

The experimental plantation made in a part of the area of 43 acres taken up for that purpose continues in a satisfactory state. Only 64 out of the 519 plants of *Hevea braziliensis* sent from Ceylon survived the transport; but these are now healthy-looking and thriving, measuring as follows:—

No.	*Height.* Feet.	*Diameter at one foot from the ground.* Inch.
2	7	
1	6	
7	5	
12	4	
20	3	
22	1 foot and below	at 6 inches from the ground.

233. The age of these plants is 10 months. The two plants of *Castilloa elastica* were planted out in low ground, and are doing well, measuring three and four feet in height, and three-eighths and three-fourths of an inch in diameter, at one foot from the ground.

Castilloa elastica.

234. From the *ceara* seed 651 plants were raised; and of these, 241 were planted out in the plantation; 410 are still in boxes. The measurements of the 241 plants set out are as follows :—

Cultivation of *Ceara-Manihoot glaziovii.*

Age,— No.	Months.	*Height,*— Feet.	*Diameter at one foot from the ground,*— Inches.
2	11	14	2¾
7	11	8	2
50	7	5	1¼—1½
87	5—6 days.	3	¾—1 at 6in. above ground.
95	8	1	

Some of the plants are already flowering and bearing seed.

235. The two vanilla plants were manured and are thriving; but, of the two cocoa plants, one did not survive the hot weather. The five nutmeg trees are growing well; but this is not an uncommon tree in Mergui. The *Pithecolobium saman* thrives here, as apparently everywhere.

Vanilla and other species.

TENASSERIM CIRCLE.

SALWEEN DIVISION.

Unreserved Forests.

1.—Areas and Boundaries.

The Salween division, in this portion of the report, comprises the Salween Division proper,—the East Salween, the West Salween, and the Attaran divisions. This arrangement is necessitated by the fact that all timber is brought to depôt at Moulmein, and all accounts of the West and East Salween and Attaran divisions are incorporated in those of the Salween Division proper, there being no treasury, except in this division.

2.—Protection and Improvement.

236. During the year, two large parcels of mahogany seed were received from the Calcutta Botanical Gardens and one from Ceylon. The seeds were sown, in the Deputy Conservator's garden, in boxes, and 250 seedlings germinated, of which however 200 only became strong and hardy plants. Of these, 104 were sent to Mergui, at the end of the year, to be planted in the Mergui plantation. The remaining plants have, since the end of the year, been planted out near Amherst.

Experimental cultivation of mahogany.

237. The Attaran forester, Shway At, was tried by the District Magistrate for accepting a bribe of Rs. 200 from people who had cut teak trees in their toungyas. He was sentenced to a fine of Rs. 100, and the bribe of Rs. 200 was confiscated by the court. The three toungya-cutters absconded. Two persons were found guilty of illicit girdling of 30 teak trees in the Ko-lone forest, and two of felling and burning three teak trees in the Thoung-yin forest. All four were fined. One person was found in possession of 51 short logs of padouk, and had the same confiscated. A case of girdling, without orders, of 316 teak trees, in the Lower Thoung-yin, is still pending. It took place at the beginning of the year, and arose out of a Karen contractor being asked to give information regarding the precise position of a certain teak locality hitherto unknown, and also regarding the number of teak trees fit for girdling in it. The information was supplied, and the Karen immediately sent up a party to girdle the trees, hoping that, by relieving Government of the trouble and expense connected with girdling, he would have prior claim to be

Breaches of forest rules.

employed in the extraction of this timber when seasoned. Mr. Bingham, who was sent to investigate the case and report on the trees girdled, failed, in the first instance, to reach the locality owing to the high rise of the Thoung-yin river, and, on the second occasion, had to return by reason of ill-health.

Illicit girdling of teak in the Thoung-yin district.

238. Traces of illicit girdling were discovered by Mr. Thellusson in the Upper Thoung-yin forests, and there is reason to believe that illicit girdling to a small extent, a tree or two here and there, in remote and unfrequented portions of the forests, has been carried on for years past. That the Karens residing in the locality are the culprits there can be no doubt of; but to bring the offence home to them is exceedingly difficult. The vast extent of the forests and their proximity to the frontier also render protection next to impossible, while the present system of extracting dead and seasoned timber wherever it is found continues. The only remedy will be to close certain portions of the forest altogether, and restrict the work to those only in which girdling will be carried on in accordance with the plan framed lately by the Inspector-General.

Breaches of forest rules by toungya cultivators in Upper Salween forests.

239. Two persons were tried by the Assistant Commissioner of Pa-poon for cutting teak trees in their toungyas, and fined Rs. 50 each: these were however only trial cases, undertaken with the view of ascertaining whether the rules could be enforced without causing a general exodus of the Karens to other localities. As soon as the result of these cases was made known, the Karens submitted numerous petitions to the effect that the enforcement of the rules would leave them no land to cultivate, teak being so widely spread as to be found in all the lands taken up for toungya cultivation. On reference to the Inspector-General, it was decided that no cases should be prosecuted by the Divisional Officer, except after consulting with, and obtaining the approval of, the Civil Officer, it being understood that, in the meantime, no time be lost in selecting and obtaining suitable areas for reservation out of whatever has escaped destruction from the hands of toungya cultivators.

Defacement of marks on timber in transit on the Salween.

240. One case was tried by the Deputy Commissioner for the defacing and super-marking of British Thoung-yin timber; but the accused was discharged after a long imprisonment before trial. With the large prices paid for timber in the forests, and the long-continued bad state of the timber trade in Moulmein, many of the petty timber-traders who formerly made a fair living have either become insolvent or too poor to carry on business; and the consequence is a large increase of timber-thefts, which are so cleverly and cunningly managed that it is almost impossible to bring the offenders to justice. However, dacoities of money sent to the foreign States become annually rarer, and not a single case has been brought to notice during the year under review. This however, there is reason to believe, is not so much due to the increase of honesty amongst the jungle population as to the better protection afforded by means of guards sent with the money.

3.—Yield and Working.

Girdling operations.

241. Two hundred and eighty-nine 1st class teak trees were girdled by Mr. Aplin in the Meh-tha-louk forests of the Upper Salween district. The work commenced on the 22nd February, and by the 8th March sufficient information had been gained regarding the distribution of the teak available for girdling to show that nothing remained of the original teak forests but narrow belts on the crests of the more rocky ridges and steeper slopes, the whole area elsewhere, with the exception of evergreen and *dipterocarpus* forests, having been over-run by toungya cultivation. On an average only 25 teak trees could be selected daily, the ground being in places almost impassible on account of huge limestone boulders: this and the difficulty also of ascertaining the precise position of these isolated teak tracts, made it evident that very little progress could be made in girdling in such localities; and it was decided, after consultation with the Inspector-General, then in the Upper Salween district, to suspend girdling operations, and depute Mr. Aplin to the more important work of selecting areas for demarcation.

242. The expenditure incurred was Rs. 74-4-0 for girdling and Rs. 38 for elephant-hire and Rs. 98-15 for girdling establishment, making a total of Rs. 211-3-0.

Girdling expenditure.

243. The out-turn of teak timber for the year from the Salween forests and the Meh-tha-louk district of the Upper Salween forests, as shown in form 55, amounts to 7,704 logs, containing 5,335 tons. This timber was delivered at a cost of Rs. 74,698, or Rs. 9-8-9 per log or per ton Rs. 13-11-7. This year's figures show a falling off of 596 logs or 1,539 tons, which is doubtless due to the late suspension of girdling operations. From the Thoung-yin forests, where, as already reported, illicit girdling is suspected, timber of good quality is obtained; otherwise the extraction is limited to Nat-that and Aw-leh dead timber and windfalls.

Teak timber extracted from the forests by Government agency.

244. The timber of other kinds extracted by the Forest Department contractors amounted to 2,225 pieces or 754 tons, accounted for as follows :—

Out-turn of timber of other kinds by departmental agency.

	Logs	Tons.
Padouk	1,642	189 22
Pyingado	344	150·6
Pyinma	34	16 10
Thitka	176	323 33
Thitkado	28	73 41
Pine	1	1·37
Total ..	2,225	754 03

The cost of extraction of this timber amounts to Rs. 8,702-11-0, or on an average Rs. 3-14-6 per piece or Rs. 11-8-5 per ton. In addition to this, 3,140 pyingado sleepers were extracted, measuring 217 tons. The cost of this, *viz.*, cutting and extracting and freight to Calcutta, amounts to Rs. 9,803-11-10, or average per piece Rs. 3-1-11 or per ton Rs. 45-1-3.

245. Contracts have been granted for the extraction of the following number of logs during 1880-81 from the—

Contracts for the extraction of timber during 1880-81.

	Teak logs and pieces.
Thoung-yin forests	3,000
Meh tha louk forests	300
Beelin forests	400

as well as for the extraction of 300 logs of padouk and of 600 of thitka.

246. The Attaran and Pan-daw leased forests yielded during the year 2,952 logs of teak, containing 1,345 tons, and 43 logs of other kinds, containing 43 tons.

Out-turn of timber from leased forests.

247. During the year 3,603 logs and boat-hulls were passed at the revenue station, aggregating 4,063 tons. The out-turn on the trade permits for the last three years has been as follows :—

Timber of other kinds extracted under trade permits.

Years.	Tons.
1877-78	1,539
1878-79	2,361
1879-80	4,063

showing an increase of 2,500 tons within three years. The amount realized as revenue on these 4,063 tons amounted to Rs. 15,994-4-0. At present, almost the whole of the Tha-tone district is beyond the operation of the forest rules, and Tha-tone and many other large villages are, as yet, supplied free from the forests in

the Martaban plains and in the lower part of the Beelin district. During the year trade permits were issued for—

	Tons.
Thingan	2,128
Pyingado	719
Pyin-ma	932
Kanyin	78
In	1,283

The total amount of permit fees amounted to Rs. 2,016-4-0. No trade permits have been issued by the civil authorities, except for the extraction of kanyin oil, which amounted to 53 viss.

Timber of other kinds extracted under free permits.

248. It is reported that free permits were issued by Civil Officers for the extraction of 5,247 logs, *viz.*,—

	Tons.
Thingan	217
Pyingado	3,281
Pyin-ma	587
In	924
In gyin	43
Anan	41
Thitya	113
Kanyin	18
Thitsee	23

These figures do not, of course, represent the total of all woods of other kinds used in the district, but exhibit only woods of the reserved kinds, which are only a fraction of the total quantity of such timber.

Free grants of teak timber.

249. Free grants of teak timber to the extent of 261 inferior logs and pieces were made from timber standing and felled on land cleared both for sanitary reasons and extension of cultivation near Pa-poon, and taken up for the Pa-poon and Ta-goon-daing high road.

Total out-turn of timber from all sources.

250. Form 55 of this division shows, in addition, 104 logs of teak, containing 103 tons, which comprised both timber purchased and timber transferred from the drift timber account at Ka-do for delivery to the Madras Government; and also 4,880 pieces of hard wood sleepers, measuring 337 tons, transferred from Mergui account. These items are of course omitted from the total yield of timber and forest produce of the forests in this division. The total yield of the forests in this division from all sources of timber of every description is as follows :—

	Logs and pieces.		Tons.	
Teak,—				
By Government agency	7,704		5,335	
By lease or permit-holders	2,952		1,345	
By free grants	261	about	87	
Total	10,917			6,767
Timber of other kinds,—				
By Government agency	5,365		972	
By lease-holders	43		43	
Under trade permits	3,603		4,063	
Under free permits	5,247	about	5,247	
Total	14,258			10,325
Grand Total ..	25,198			17,096

In addition, 760 bamboos were obtained by confiscation, they having been used in the transport of illicitly felled padouk.

Shipping transactions.

251. Three hundred and nineteen logs of teak and 18 logs of padouk were shipped for the Gun-carriage Factory at Madras at a cost for extraction of Rs. 22,694-4-2, including cost of freight and delivery. Two hundred logs of padouk were supplied to the Gun-carriage Factory at Bombay at a cost to the department of Rs. 10,056-15-2 : this again includes the cost of freight.

Timber supplied to Jail Department.

252. The Jail Department in Moulmein was supplied with 100 logs of thitka, 52 teak, and 147 padouk at a cost to the department of Rs. 2,811-1-11.

Disposals of timber.

253. During the year under review, the following amount of timber was disposed of in this division :—

How disposed of.	Number of logs, &c.	Amount realized.	Remarks.
		Rs. A. P.	
By public sale of teak timber	4,482	71,813 6 0	
By indent or private sale of teak timber ..	4,993	87,537 10 3	
Woods other than teak	2,720	*42,261 9 6	* Includes Rs. 8,781-15-0 (outstanding) at the close of the year, but realized in April 1880.
Squares	80	315 0 0	
Scantlings	Tons 21	141 8 0	
Hard-wood sleepers	477	1,890 2 6	
Slabs and log ends	..	881 13 0	
Bamboos	760	22 13 0	
Total ..	13,483	2,04,893 14 3	
		†459 15 8	† This sum was realized during the year on account of former year's outstanding for scantlings.
Total ..		2,05,353 13 11	

The average prices realised during the year stand as follows :—

	Rs. A. P.
Teak—	
Per piece	16 13 1
Per ton	22 13 1
Wood of other kinds—	
Per piece	15 8 7
Per ton	30 15 7
Hard wood sleepers—	
Per piece	3 15 4
Per ton	57 1 8

The average cost of the timber to Government has been —

Teak—	
Per piece	9 8 9
Per ton	13 11 7
Other kinds of wood—	
Per piece	13 14 6
Per ton	11 8 5
Hard wood sleepers—	
Per piece	3 1 11
Per ton	45 1 3

The average cost during the previous year was—

Teak—	
Per ton	14 10 3
Other kinds of wood—	
Per ton	25 11 0
Hard wood sleepers—	
Per ton	51 13 11

The decrease, as concerns teak, was due to the fact that a considerable quantity was small Lower Salween timber, for which a less price was paid.

As regards other woods, it was due to the working of 1,571 padouk tops and branches at very low rates; and, as regards the cost of sleepers, to the lower rate of freight from Moulmein to Calcutta.

Elephant establishment.

254. Of the two elephants in the Salween division, one died after an illness of one day at the close of the rains, when sickness is prevalent. The animal was purchased some four years ago for Rs. 1,800, and proved of great service at the Battery Point Depot. The tusks were sold for Rs. 219.

A small female elephant belonging to the South Tenasserim division was transferred to Moulmein.

The result of elephant labour does not, for this reason, show so favourably as last year.

The cost of keep and food amounts to Rs. 1,867-12-3 and the value of labour performed to Rs. 2,295-12-0.

Financial Results.

Salween Forest division.

254*a*. The receipts of the year, exclusive of Kado, which is treated in a separate chapter amounted to Rs. 215,823-9-11, and expenditure Rs. 192,674-7-4; surplus, Rs. 23,149-2-7.

To this must be added Rs. 15,379-11-0 expended on account of the South Tenasserim division, thus raising the net income to Rs. 38,528.

From the above it will be seen that the receipts show a decrease of Rs. 10,625 as compared with those of the previous year; but the expenditure at the same time has increased by Rs. 4,094. Owing to the out-turn falling off in quality and quantity, no improvement can be expected in the receipts until the new girdled timber comes to hand.

It must at the same time be taken into consideration that Rs. 8,781-15-0 was due by the Bombay Gun-carriage Department at the end of the year, and that a large number of sleepers were still undelivered in Calcutta.

The outstandings on account of advances made during the year amounted to Rs. 6,597-11-0, the whole of which is covered by work in hand.

Transactions with other departments.

255. During the year, Rs. 65,089-4-3 were debited against other departments for timber sold to them.

The total cost of this timber to the Forest Department amounted to Rs. 35,562-5-3, leaving a net profit of Rs. 29,526-15-0, of which however Rs. 8,781-15 are still due.

Results of sleeper transactions.

256. As mentioned under the chapter "Working and yield," 3,140 pyingado sleepers were sent from Moulmein to Calcutta at a cost of Rs. 15,236-6-2, including freight to Calcutta, in addition to 4,880 sleepers which were sent from Tavoy and Mergui.

The whole transaction of pyingado sleepers, for the last two years, stands now as follows:—

	Sleepers.		Rs.	A.	P
Landed in Calcutta previous to 1879 ..	.. 5,525	Paid to contractors ..	29,336	14	0
Shipped from Salween division ..	.. 3,140	Do. for freight from Tenasserim to Moulmein ..	5,496	0	0
Do from South Tenasserim ..	.. 4,880	Do. for transhipping ..	1,030	8	0
		Do. for freight from Moulmein to Calcutta ..	4,640	0	0
Total ..	13,545	Total cost ..	40,503	6	0

From the total number of sleepers, 13,545 is deducted 5,859, the number disposed of at Rs. 25,742-14-9; balance 7,686, valued at as low a rate as Rs. 4 per piece, or Rs. 30,700, is still in hand in Calcutta.

A. II.—Kado Timber Revenue Department.

Control of Timber Revenue Department.

257. The Kado timber revenue station continued to be the special charge of the Deputy Conservator of Forests, Salween division.

Protection and Improvement.

Breaches of Kado rules.

258. During the year, 42 cases, implicating 49 persons, were tried for breach of Kado rules or other offences connected with timber, and one case, including two persons,

was transferred to the District Magistrate's court. Both these persons were convicted of having disposed of drift timber in Moulmein, and sentenced respectively to six months' and one year's rigorous imprisonment. The first of the two was however acquitted on appeal; only one case was pending at the end of the year.

Timber-thefts and defacement of timber marks.

259. In 1879 the number of cases tried was 68, implicating 85 persons; but the decrease during the year under review is not so much due to timber-thefts having become less, but to the fact that the thieves and defacers of timber marks have become more acute, and better acquainted with defects in the rules, and avoid exposing themselves to punishment. They now adopt two distinct modes of procedure: the first is to slip the timber into the depôt without reporting it, and at once leave for the forests; the other plan is to allow the timber to be brought in as drift timber into the Government depôt.

The procedure in both cases is followed up by a second party obtaining an order of attachment of the civil court for the timber by actual seizure, and the timber is subsequently sold under a decree of the court.

Upon legal advice taken in this matter, it has been resolved to deal with and confiscate the timber in question after clear proof of defacement of marks as prescribed in the forest rules. This, it is hoped, will effectually put a stop to the practice of disposing of defaced stolen timber through the procedure of the civil court.

It is much to be regretted that the defacers will escape scot-free, and some of the purchasers will, in the first intance, be the sufferers.

Yield of the Forests beyond the Frontier.

Foreign timber entered at the Kado timber revenue station.

260. The number of teak logs and pieces reported at the Kado timber revenue station during the year amounted to 111,537, made up as follows:—

	Logs.	Tons.
Full-sized	99,390	119,268
Under-sized	4,939	3,951
Pieces	7,208	4,324
Total ..		127,543

	Logs.	Tons.
Timber of other kinds	3	3

Improvement in the weight and quality of the timber.

261. These figures would, at the first glance, show a falling-off of 13,896 logs and pieces; but there is a large increase in the value and the cubic contents of the timber reported during the year.

The number of full-sized logs shows an increase of 9,260, and it is only in the under-sized logs and pieces that a decrease has taken place, *viz.*, of the former, 3,126; of the latter, 20,030. In cubic contents, the increase over last year amounts to 8,330 tons.

The quality of the timber which has been received during the year is also much better than that of any which has come to hand during the last four years: this can only be attributed to the high prices prevailing for 1st class timber.

Out-turn of past four years.

262. The out-turn of foreign timber during the last four years was as follows:—

Name of forest.	1876-77.				1877-78				1878-79.				1879-80.			
	Logs.	Tons.	Pieces.	Tons.	Logs.	Tons.	Pieces.	Tons.	Logs.	Tons.	Pieces.	Tons.	Logs.	Tons.	Pieces.	Tons.
Karennee	43,366	42,781	2,812	1,800	61,884	68,036	2,983	1,491	46,208	50,509	2,164	1,082	67,899	81,146	1,436	861
Kyaing-tonè	9,524	9,395	3,209	2,054	23,981	26,379	2,449	1,224	12,206	13,424	841	420	12,450	14,907	407	244
Maing-lone-gyee	18,277	18,030	169	108	14,285	15,714	385	192	7,914	8,702	96	48	13,245	15,868	51	30
Thoung-yin	28,114	27,735	9,438	6,040	20,239	22,213	9,153	4,576	26,706	27,398	23,771	11,885	9,663	10,099	5,088	3,052
Da-kwin	6,380	6,294	649	415	4,918	5,409	183	91	4,400	4,723	366	183	1,072	1,202	226	135
[illegible]ittang	2,552	2,518	..	..	3,386	3,724	..	..	761	837	..	..	..	..	..	..
Total ..	108,213	106,753	16,277	10,417	128,693	141,475	15,153	7,574	98,195	105,593	27,238	13,618	104,329	123,222	7,208	4,322

263. From the foregoing statement it will be observed that the amount of Karennee timber imported increased by 20,963, and the foreign Thoung-yin has decreased by 17,043 logs and 18,683 pieces, and the Da-gwin by 3,328 logs and 140 pieces.

Review of increase and decrease of Foreign teak timber.

The explanation of this lies in the fact that the Karennee forests have been worked by the more wealthy timber-traders, who, when they found the market sink more and more, made every effort to supply a better article, in which they have succeeded, though, it is to be regretted, at the ruin of most of them.

The Thoung-yin and Da-gwin forests were more or less the resort of petty timber-traders who have been utterly ruined, and it will take time and money to revive the exports from this quarter.

264. The following British timber was reported and entered at Kado :—

Timber from British forests reported at Kado.

	Full-sized.	Under sized.	Crooks.	Stems
Pandaw	1	1	1,430	26
Thoung-yin	3	0	0	0
Attaran	105	442	753	191
Total ..	109	443	2,183	217

In addition, 42 thitkado and one log of thingan also from the Mee-ta-git Ko-doo-gweh in the Attaran forests were entered.

265. The number of logs and pieces cleared from Kado during the year amounted to 1,23,982 or 111,583 tons ; and the balance left at the end of the year amounts to 66,907 logs and pieces or 46,056 tons, being 9,494 logs and pieces or 22,704 tons less than the quantity on hand at the close of the previous year. Duty was paid on 1,29,354 logs and pieces, representing a value of Rs. 3,324,062, showing a difference of 4,628 logs and pieces between the number which cleared Kado and the number on which duty has been paid, which is explained by the fact that these were either in the course of clearing from Kado, or that clearing orders had not arrived before the 1st April.

Teak timber cleared at Kado on payment of duty.

The amount of British timber cleared numbered 3,921 logs or 969 logs and pieces above the number reported, which therefore belong to the last year's balance.

266. In addition to teak, seven inferior logs of thitkado and 73 decayed pine logs were cleared for fire-wood.

Timber of other kinds cleared at Kado.

267. Out of the balance in Kado at the end of the year, 56,000 logs changed ownership, and, of this number, about 45,000 were held under mortgage by the bank.

Balance on hand at close of year.

The balance contains a considerable number of logs which arrived previous to the 1st April 1878. Under the Forest Rules of 1865, the owners might have been forced to clear this timber ; but the depressed state of the timber trade which existed for the last four years would have made the enforcement of the rule if not an injustice still an undeserved hardship to the timber-trader, causing serious loss of money, and at the same time resulting in a probable loss of the *ad valorem* duty.

In accordance with the rules, the owners however must obtain permission to retain timber in the depôt after the period of two years has elapsed.

268. The number of logs and pieces salved and brought into depôts during the year amounted to 4,572 logs or 2,286 tons, which amounts to 2,246 logs or 1,123 tons less than the collection of the previous year.

Drift timber operations on Salween river and sea-shore.

The decrease in the number of logs salved is due to the fact that the rains last year were mild and regular, and that no sudden flushes were experienced, which usually carry away considerable quantities of timber to the sea.

Disposals of drift timber.

269. During the year 1,772 logs were made over to claimants and 3,510 were disposed of, 117 were transferred to the Salween division, and three were used for Government purposes. In spite of these large disposals, 5,270 logs and pieces of drift timber are still on hand.

The balance of drift timber in hand for the last two years has been unusually high; but it has not been thought advisable to sell the timber at the low prices which were then reigning.

Financial result of drift timber operations.

270. The cost of the drift timber transactions during the year has been Rs. 19,352-6-7 and the receipts Rs. 46,800-6-0, yielding a profit of Rs. 27,447-15-7. However, the balance of logs and pieces has decreased by 830.

Amounts realized on drift timber by sale and otherwise.

271. The drift timber was disposed of as follows:—

	Logs. &c.	Rs.	A.	P.
Public sales of teak timber	3,427	38,663	4	0
Indent or private sale	83	934	6	0
Delivered to claimants	1,772	7,202	12	0

Registration of hammer marks.

272. One hundred and four new marks were registered, and the registration of 195 old ones was renewed, yielding Rs. 2,990, or Rs. 470 more than during the previous year.

Powers-of-attorney.

273. Ninety-five powers-of-attorney were also registered during the year, and 620 collecting licenses were issued to 212 different parties.

Financial Results.

Receipt and expenditure of Kado Timber Revenue Department.

274. The receipts of the Kado in Timber Revenue Department during the year amounted to Rs. 2,84,554-8-0 and the total expenditure to Rs. 30,715-13, which gives a surplus of Rs. 253,838-11-0.

The receipts have been as follows:—

	Rs.	A.	P.
Duty on British timber	2,036	4	0
Do. on Foreign timber	232,692	14	0
Confiscated and drift timber	46,800	6	0
Miscellaneous	3,025	0	0
Total ..	284,554	8	0

Disbursements as follows:—

	Rs	A.	P.
Under A	19,668	3	7
Under B	11,047	9	5
Total ..	30,715	13	0

Review of receipts and expenditure.

275. The receipts show the following increase as compared with those of the previous year:—

	Rs.	A,	P
Duty on foreign timber	6,423	7	0
Confiscated and drift	27,521	0	0
Miscellaneous	434	0	0

and a decrease of Rs. 1,230-13 under duty on British timber.

The increase is due to the improved timber market during the last six months of the year, and the decrease to the abolition of the permit system and gradual exhaustion of the leased British Burma forests in the matter of marketable timber 7½ feet in girth and above.

B.—SOUTH TENASSERIM DIVISION.

Protection and Improvement.

Breaches of forest rules.

276. Only one case of breach of forest rules was tried in the Mergui district, and the offender was fined.

This is due to the fact that the forests on the Yangan stream, on the Mee-joung stream, and on the Baw-myit and Boke-pyin in the township of Lay-hnya, which were formerly understood to be part of the Government forests, have been found to be beyond the forest limits of the Mergui district. These tracts supply to a great extent the requirements of the people in the shape of forest produce.

No cases have been reported from the Tavoy district.

Yield and Working.

Timber extracted by Government agency.

277. The yield of the forests by Government agency has been as follows :—

Mergui .. 127 old sleepers (anan).
Tavoy .. 3,814 „ pyingado.
Mergui ..66 trees of thingan and 43 of pyin-ma.

The decrease in the out-turn of pyingado sleepers from Tavoy is due to advances being discontinued to some of the contractors.

Contracts for next year.

278. For the next year, permits have been issued for the cutting and extraction of 4,500 sleepers at Tavoy, and for the cutting up of another 3,000 sleepers at the steam saw-mill in Tavoy.

Timber extracted under trade permits.

279. Under trade permits, 70 logs—66 thingan and four pyin-ma—either in the round or in the shape of boat-hulls, were passed at Mergui upon the payment of purchase-money. They aggregated 109 tons, and the amount of purchase-money realized on them amounted to Rs. 484-0-7, showing a decrease of Rs. 633-6-1 as compared with the previous year.

At Tavoy, 10 thingan logs and 217 pyingado, aggregating about 86 tons, were passed, and realized Rs. 390-2-7.

Trade permits were granted at Mergui during the year for the extraction of 105 thingan, 29 anan, and four pyin-ma trees, yielding a permit fee of Rs. 68; and at Tavoy, trade permits were issued for 27 thingan, 198 pyingado, and one anan tree, yielding permit fees to the amount of Rs. 113.

Free permits.

280. The amounts of free permits granted in this division is extremely small.

Minor forest produce.

281. The right of collecting wood oil was sold by the civil authorities at Tavoy for the sum of Rs. 1,833-8-0.

Removal of elephant.

282. The elephant which was kept at Tavoy has been transferred to the Salween division.

Financial.

Receipts and expenditure in South Tenasserim division.

283. The total receipts on account of the South Tenasserim division have been Rs. 27,742-7-5, against an expenditure of Rs. 21,480-14-4, yielding a net surplus of Rs. 6,261-9-1. The expenditure here shown includes Rs. 15,379-11-0 paid by the Salween division on account of the pay of the Tavoy establishment, the cost of sleepers at Tavoy, and transhipping the same at Moulmein, and freight thence to Calcutta.

Net surplus.

284. In addition to the net surplus, *viz.*, Rs. 6,261-9-1, the value of 4,379 of the sleepers now in Calcutta must be credited to this division, representing a value of at least Rs. 17,500.

SECTION IV.—GENERAL.

Exports and imports of teak timber in Rangoon.

285. During the year 23,746 tons of teak were exported from Rangoon, showing a decrease of 6,866½ tons as compared with the previous year.

The following are the exports and imports of teak during 1879-80 :—

	Ports.	Tons.	Value.
FOREIGN	United Kingdom	4,193	3,06,055
	Cape of Good Hope	405	32,350
	Germany	9	880
	Ceylon	1,455	1,01,350
	Straits Settlements	499	34,098
	Total ..	6,561	4,74,683
INDIAN	Bengal (Calcutta)	8,610	5,16,357
	Do. (Other Ports)	198	13,831
	Bombay (Bombay)	4,364	3,04,842
	Sind (Kurrachee)	857	59,990
	Madras (Madras)	2,482	1,69,928
	Do. (Other Ports)	89	3,168
	Provincial Ports	585	45,200
	Total ..	17,185	11,13,316
	GRAND TOTAL ..	23,746	15,87,999

The following figures represent the teak timber brought into the Rangoon timber market during the year in the Pegu Forest circle :—

Imports.	Logs.	Tons.
Sittang	29,580	26,030
Irrawaddy	3,227	3,686
British forests	11,598	10,668
Total ..	44,005	40,384

Exports of teak timber from Moulmein.

286. The export of teak timber from Moulmein amounted during the year to 97,415¼ tons, showing a decrease of 5,791¾ tons as compared with the previous year. The large stocks in the Indian and European markets will account for the decrease.

	Ports.	Tons.	Value.
United Kingdom		22,297	16,00,075
France (Bordeaux)		1,089	87,115
Cape of Good Hope		1,229	91,642
Germany (Bremen)		1	85
Spain (Gibraltar)		899	62,924
Mauritius (1,826,150 shingles)		952 608	95,529
Ceylon		3,175	1,71,889
Straits Settlements (235,000)		31 78	5,204
Other countries in Asia (Sumatra) (1,411,000)		1,220 470	1,04,171
BENGAL ..	Calcutta (50,000)	21,897 16	14,58,057
	Other Ports	331	15,758
BOMBAY ..	Bombay	28,160	13,70,061
	Other Ports	....	....
MADRAS ..	Madras	9,617	4,30,266
	Other Ports	4,431	1,68,119
Provincial Ports (5,916,850)		3,020¾ 1,972	2,50,304¾
Pondicherry		922	33,125
Total ..		97,415¼	60,34,834¼

Imports of teak timber into the Moulmein market.

287. The following teak timber has been brought into the Moulmein timber market during the year :—

	Logs and pieces.	Tons.
Salween	111,537	127,544
British leased forests ..	2,952	1,345
Worked out by Government contractors	7,719	5,350
Total ..	122,208	134,239

Exports of other woods from Moulmein.

288. The export of woods of other kinds from Moulmein is shown in the following statement:—

Ports.	Tons.	Value.
United Kingdom	53	1,865
Germany (Bremen)	1	15
Cape of Good Hope	128	5,035
Bengal (Calcutta)	591	22,115
Bombay (Bombay)	161	18,746
Madras .. Madras	44	5,616
Madras .. Other Ports	4½	804
Provincial Ports	223	7,358
Total ..	1,205½	61,651

Exports of minor forest-produce.

289. The exports of minor forest produce from Rangoon and Moulmein are shown in the subjoined table:—

Articles.	Whither exported.	Moulmein.		Rangoon.	
		Quantity.	Value.	Quantity.	Value.
Caoutchouc (raw) ..	United Kingdom	..	..	1,971	1,88,745
	Bengal (Calcutta)	..	..	434	54,179
Gums and resins ..	United Kingdom	2,999	43,984	95,305	12,20,180
	Spain (Gibraltar)	1,000	12,000	..	..
	Egypt (Port Said)	..	..	8,017	1,16,574
	Ceylon	..	..	62	744
	Straits Settlements	..	..	46,907	5,10,714
Catch and gambier ..	Bengal (Calcutta)	..	..	90,733	13,23,628
	Do. (Other Ports)	..	..	16	252
	Madras (Madras)	..	..	446	5,419
	Do. (Other Ports)	..	..	88	947
	Provincial Ports	1	12	4,272	56,970
	Total ..	4,000	55,996	248,251	3,478,302
Ditto other sorts ..	Straits Settlements	..	..	2	53
	Bengal (Calcutta)	..	..	1,546	14,416
	Provincial Ports	..	..	4	25
	Total ..	..	..	1,552	14,494
Stick lac ..	Straits Settlements	7	100	418	8,281
	Bengal (Calcutta)	58	1,957	4,719	1,64,787
	Bombay (Bombay)	..	..	71	1,074
	Madras (Madras)	..	..	959	16,626
	Do. (Other Ports)	..	..	255	5,977
	Provincial Ports	100	1,973	38	728
	Total ..	165	4,030	6,460	1,98,023
Vegetable oils ..	United Kingdom	..	..	410	410
	Straits Settlements	160	240	1,693	2,894
	Bengal (Calcutta)	..	..	731	1,004
	Do. (Other Ports)	..	..	4,252	6,968
	Madras (Madras)	180	187	5,264	8,996
	Do (Other Ports)	156	97	1,496	1,350
	Provincial Ports	47,010	93,570	8,149	13,887
	Total ..	47,506	94,094	21,995	30,459
Ditto (other kinds) ..	United Kingdom	..	..	2	2
	Siam	..	..	87	49
	Straits Settlements	..	..	18,142	13,618
	Bengal (Calcutta)	..	..	44,367	42,646
	Do. (Other Ports)	..	..	2,61,018	1,81,281
	Madras (Madras)	120	90	19,227	17,022
	Do. (Other Ports)	..	..	544	600
	Provincial ports	368	293	1,07,617	76,845
	Total ..	488	383	4,51,004	3,32,013
Spices (cardamoms) ..	Ceylon	766	867	..	..
	Straits Settlements	..	..	1,285	869
	Bengal (Calcutta)	..	..	5,496	4,730
	Do. (Other Ports)	..	..	6	5
	Madras (Madras)	4,779	3,915	78,103	60,563
	Do. (Other Ports)	7,130	4,827	7,944	7,216
	Provincial Ports	39,125	27,428	..	..
	Total ..	51,800	36,537	92,834	73,383
Wax ..	United Kingdom	..	..	75	3,000
	Straits Settlements	..	..	273	19,633
	Provincial Ports	1	75	3	350
	Tota ..	1	75	351	22,983
Myrabolams ..	Madras (Other Ports)	..	..	293	1,172

290. The timber trade both in Moulmein and Rangoon was extremely depressed in the beginning of the year, till suddenly in October last, a large demand for teak timber arose for ship-building at home.

Moulmein timber trade.

The shippers and those foresters who could hold on to their timber have made large profits; but (especially in Moulmein) all the smaller timber-traders

and many of the foresters who were wealthy are now ruined, and the fortunes of most foresters which had been accumulated by them and their fathers during many years of hard work and exposure have quite disappeared under the late unprecedented long depression in the timber trade. Still, since the timber trade has once revived, there is no doubt that Chetties and others will again advance money, and fortune may yet be retrieved, in the export of foreign timber, by many who seem at present utterly ruined.

Interchange of seeds &c.

291. During the year seeds of different kinds, and of bamboos, were sent to New Zealand, Queensland, and South Australia.

Teak seed, requisitions.

292. The following requisitions for teak seed were met during the year:—

Conservator of Forests, Bengal	30	mds.
Deputy Conservator of Forests, Assam	10	,,
Deputy Commissioner of Akyab	6	,,
Rajah of Renoung	1	,,
Conservator of Forests, South Australia	2	lbs.

W. J. SEATON, MAJOR,
Conservator of Forests.

APPENDICES.

FORM No. 45.—*Area of Reserved Forests for the year 1879-80.*

DIVISION OR RANGE.	Name of Forest and Civil District or Territory.	AREA ON 1ST APRIL 1879.		ADDED DURING THE YEAR.		EXCLUDED OR TRANSFERRED TO OTHER HEADS.		TOTAL ON 31ST MARCH 1880.		Number and date of notification of additions and transfers, &c.	REMARKS.
		Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.		
WEST SALWEEN	*Salween district.*										
	Sin-nweh	14	8,960	...	...	...	...	14	8,960		
	Wa-meo choung	3	1,920	...	...	...	...	3	1,920		
	Meh-nan-nweh	6	3,840	...	...	...	...	6	3,840		
	Ka-hee-loo	15	9,600	...	...	...	...	15	9,600		
	Shway-gyin district.										
	One-kangyee	13	8,320	...	...	...	...	13	8,320		
	Meh-waing	13	8,320	...	...	...	...	13	8,320		
	Beela-kat-kyee	13	8,320	...	...	...	...	13	8,320		
	Amherst district.										
	Ta-geh-loung	8	5,120	...	...	...	...	8	5,120		
	Amherst district.										
ATTARAN AND YAY.	Dalee	12	7,680	...	...	...	...	12	7,680		
	Pakabo	32	20,480	...	...	...	...	32	20,480		
	Kyoon choung	17	10,880	...	...	...	...	17	10,880		
	Meh-paleh	20	12,800	...	...	...	...	20	12,800		
	Ma-oo	14	8,960	...	...	...	...	14	8,960		
	Thin-gan-nyee-noung... ...	9	5,760	...	...	...	...	9	5,760		
	Meh-gwa	19	12,160	...	...	...	...	19	12,160		
	Goon-gyee	43	27,520	...	...	...	...	43	27,520		
	Nat-choung	...	...	9	5,760	...	...	9	5,760	Revenue Department Notification No. 18F. dated 25th February 1880.	
	Total Tenasserim ...	251	1,60,640	9	5,760	...	...	260	1,66,400		
PROME DIVISION. Myngalay Range.	*East Tha-yet-myo district.*										
	(a) Tindaw	5	2,880	...	...	...	...	5	2,880	.....	
	(a) Satsoowa	7	4,800	...	...	...	...	7	4,800		
	(a) Tha-byay-hla	12	6,000	...	...	...	...	12	6,000	.....	Proposed to be abandoned.
	(a) Bangone	3	1,920	...	...	...	...	3	1,920		
	Tha-yet-myo East Yoma ...	...	...	125	80,000	...	...	125	80,000	Revenue Department Notification No. 105, dated 23rd December 1879.	
	Total ...	27	17,600	125	80,000	...	...	152	97,600		

(a) Cutch reserves.

		East Prome district.										
Prome division—(concluded).	Nawin Range.	Thitkat Ayo-doung	5	9,944	...	...	...	...	5	2,944		
		Thayetchoung and Nyoung-bindet	8	4,864	...	...	...	...	8	4,864		
		Kwaymeedo	4	2,442	...	...	...	...	4	2,442		
		Nabehbyoo	6	3,640	...	...	...	...	6	3,640		
		Shwayloung and Pwagin ...	21	13,130	...	...	...	...	21	13,130		
		Gwaycho	10	6,720	...	...	...	...	10	6,720		
		Choung-zouk	15	9,408	...	...	...	...	15	9,408		
		Nga-loo-san	...	...	1	700	...	...	1	700	Revenue Department Notification No. 434F., dated 8th May 1879.	
		Shway-kyoondaw	...	256	...	...	...	...	..	256		
		Prome plantation	...	73	...	...	...	...	...	73(b)		
		Wapyoo	2	1,536	...	...	...	...	2	1,536		
		Meedo	3	1,920	...	...	...	...	3	1,920		
		Thitwa	4	2,500	...	...	...	...	4	2,500		
		Singoung	5	3,392	...	...	...	...	5	3,392		
		Poot-kya	3	2,176	...	...	...	...	3	2,176		
		Thapanchoung	5	3,140	...	...	...	...	5	3,140		
		Loothay	1	640	...	...	...	...	1	640		
		Loobone	1	896	...	...	...	...	1	896		
		Banboung	2	960	...	...	...	...	2	960		
		Oopanlangyee ...										
		Oopanlangalay ...	4	2,304	...	...	...	...	4	2,304		
		Yaytha ...										
		(c) Toneyay	19	12,224	...	...	...	...	19	12,224		
		(c) Pouktaw	7	4,672	...	...	...	...	7	4,672		
		(c) Simmee-gweh	10	6,400	...	...	...	...	10	6,400		
		Total ...	135	86,427	1	700	...	...	136	87,127		
		Total Prome ...	162	1,04,027	126	80,700	...	...	288	1,84,727		
		Prome district.										
Tharrawaddy division	Shwaylay Range.	Shwaylay Yoma	52	33,600	...	...	...	...	52	33,600	.....	Includes Karen area 12 square miles
		Dawlay	3	1,800	...	...	...	...	3	1,800		
		Padet-myoung	7	4,500	...	...	...	...	7	4,500		
		Kyouk-kyee-oung	4	2,600	...	...	...	...	4	2,600		
		Bwet	5	2,900	...	...	...	...	5	2,900		
		Gwaydoukkwin	16	10,200	...	...	...	...	16	10,200		
		Kyee-byoo	3	2,200	...	...	...	...	3	2,200		
		Kadinzouk and Kadinthonezin...	6	3,500	...	...	...	...	6	3,500		
		Shaboung	3	2,200	...	...	...	...	3	2,200		
		Tharrawaddy district.										
	Bawlin Range.	Toung-nyo Yoma	138	88,320	...	...	...	...	138	88,320	.....	Includes Karen area 36 square miles.
		Upper Padinbin	1	600	...	...	...	...	1	600		
		Lower Padinbin	...	200	...	...	...	...	...	200		
		Tapan	7	4,260	...	...	...	...	7	4,260		
		Nyanleh	9	5,800	...	...	...	...	9	5,800		
		Kannee	1	600	...	...	...	...	1	600		
		Pazinjeh	2	1,300	...	...	...	...	2	1,300		
		Toung-nyo Myo	8	4,780	...	...	...	...	8	4,780		
		Minboo Bawbin	130	83,200	...	...	...	...	130	83,200	.....	Includes Karen area 25 square miles.
		Upper Payagyee	2	1,000	...	...	...	...	2	1,000		
		Lower Payagyee	1	600	...	...	...	...	1	600		
		Thitcho	2	1,400	...	...	...	...	2	1,400		
		Kangyee	6	3,800	...	...	...	...	6	3,800		
		Gwaydouksan	2	1,300	...	...	...	...	2	1,300		
		Choungwa	1	700	...	...	...	...	1	700		
		Myodwin	...	38	...	...	...	...	...	38		
		Choungzouk (fuel)	6	3,700	...	...	...	...	6	3,700		

(b) Erroneously shown as 64 acres in last year's report.

(c) Railway fuel reserves.

Annual Form No. 45—(concluded).

Division or Range.	Name of Forest and Civil District or Territory.	Area on 1st April 1879.		Added during the Year.		Excluded or transferred to other heads.		Total on 31st March 1880.		Number and date of notification of additions and transfers, &c.	Remarks.
		Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.		
Tharrawaddy Division—(concld.)											
On-mone Range.	Minhla Ga-mone and Toung	140	89,600	...	...	...	...	140	89,600	.....	Includes Karen area 47 square miles.
	Touk-kyan ...	7	4,640	...	...	...	...	7	4,640		
	Thakolan ...	1	960	...	...	...	...	1	960		
	Choung-nga-gone (fuel)	...	300	...	...	...	...	...	300		
	Satpoke do.	7	4,700	...	...	...	...	7	4,700		
	Sitkwin do.	4	2,700	...	...	...	...	4	2,700		
Beelin Range.	Moke-ka and Kadin Beelin	142	90,900	...	...	...	...	142	90,900	.....	Includes Karen area 30 square miles.
	Koon Beelin ...	20	12,800	...	...	...	...	20	12,800		
	Thone-zeh ...	70	44,800	...	...	...	...	70	44,800	.....	Includes Karen area 20 square miles.
	Thindawyo (fuel) ...	10	6,400	...	...	...	...	10	6,400		
	Total Tharrawaddy ...	816	523,096	...	...	...	...	816	523,096		
	(*Note*) Karen areas ...	170	108,800	...	...	—	...	170	108,800		
	Total area free of toungya privileges ...	646	414,296	...	...	...	...	646	414,296		
	Rangoon district.										
Rangoon ...	Kyet-pyoo-gan ...	3	1,800	...	...	...	...	3	1,800		
	Kadat ...	100	64,000	...	...	...	...	100	64,000		
	Magayee ...	20	12,800	...	...	...	...	20	12,800		
	Total ...	123	78,600	...	...	...	...	123	78,600		
	Hmawbee choung (fuel)	3	1,700	...	...	...	...	3	1,700		
	Thitpyat do. do. ...	5	3,100	...	...	...	...	5	3,100		
	Kyoon do. do. ...	13	8,600	...	...	...	...	13	8,600		
	Thaboo do. do. ...	12	8,000	...	...	...	...	12	8,000		
	Total ...	33	21,400	...	...	...	...	33	21,400		
	Total Rangoon ...	156	100,000	...	...	...	...	156	100,000		
	Toungoo district.										
Toungoo ...	Pyoon choung ...	5	3,400	...	...	...	...	5	3,400		
	Kannee ...	...	60	...	...	...	...	...	60		
	Yaynay ...	9	5,800	...	...	...	...	9	5,800		
	East Swa ...	...	...	27	17,280	...	...	27	17,280	Revenue Department Notification No. 26, dated 24th March 1879.	
	Bone-doung ...	...	...	40	25,600	...	...	40	25,600		
	Total Toungoo ...	14	9,260	67	42,880	...	...	81	52,140	.....	Sanctioned, 31st March 1880; not yet notified.
Shway-gyin ...	*Shway-gyin district.*										
	Binbyee	10	6,400	...	...	...	...	10	6,400		
	Total Pegu Circle ...	989	633,965	193	123,580	...	...	1,182	757,565		
	Total Tenasserim Circle ...	251	160,640	9	5,760	...	...	260	166,400		
	Grand Total ...	1,240	794,625	202	129,340	...	...	1,442	923,965		
	Note.—Total area allotted for Karens within forest reserves...	170	108,800	...	...	...	...	170	108,800		

FORM No. 46.—[PRESCRIBED].—*Area of plantations for the year 1879-80.*

DIVISION.	NAME OF PLANTATION.	ON 1ST APRIL 1879.		DURING 1879-80.		ON 31ST MARCH 1880.		REMARKS.
		Area.	Total cost.	Area added.	Cost.	Total Area.	Total cost.	
		Acres.	Rs.	Acres.	Rs.	Acres.	Rs.	
SALWEEN...	Thin-gan-nyee-noung	10	14,993	...	.....	10	14,993	Formed in 1856 and not extended.
	Shway-goon	5	3,787	...	.....	5	3,787	Ditto ditto.
	Ko-lone island	2	3,539	...	.....	2	3,539	Ditto ditto.
	Total, Tenasserim Circle ...	17	22,319	...	.....	17	22,319	
PROME	Prome plantation	73	8,967	...	32	73	8,999	Rs. 24 fire protection; Rs. 8-8-0 cost of thinning.
RANGOON ...	Kyet-pyoo-gan	683	75,173	...	1,650	683	76,823	
	Magayee	1,306	1,04,423	41	10,600	1,347	1,15,023	41½ acres consist of evergreen plantation.
THARRAWADDY ...	Choung-wa	340	34,727	...	...	340	34,727	
	Kwayma-kaing	144	15,851	...	82	144	15,933	Rs. 82 cost of thinning and plantation guard.
	Myo-dwin	10	431	...	424	10	855	Rs. 12 cost of fire-protection in 1879-80, and balance costs of fire-protection in previous year; now debited.
TOUNGOO... ...	Kannee	70	1,373	...	...	70	1,373	
	Pyoon-choung	686	24,321	...	148	686	24,469	Cost of planting evergreen belt to keep out fire.
	Yaynay	...	.....	9	168	9	168	
	Total, Pegu Circle ...	3,322	2,65,286	50	13,104	3,372	2,78,370	
	GRAND TOTAL ...	3,339	2,87,585	50	13,104	3,389	3,00,689	

FORM No. 46A.—*Statement of toungya teak plantations, British Burma, for 1879-80.*

Division or Range.	Name of Reserve	Year of formation.	Area on 1st April 1879.	Area planted with teak during the year.	Cost up to 1878-79.		Cost during 1879-80.		Total cost.	Average cost per acre up to 1879-80.	Area on 31st March 1880.
					Original cost.	Maintenance.	Original cost.	Maintenance.			
			Acres.	Acres.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Acres.
WEST SALWEEN.	Sin-zweh	1869-70	384	*	2,212 7 10	632 10 8	457 9 7	475 13 6	3,778 9 7	9 13 5	384
	Wa-moo	1877-78	2	1	5 0 0	7 0 0	.....	.....	12 0 0	4 0 0	3
	Ka-hee-loo	1879-80	...	13	.....	.....	39 8 4	.....	39 8 4	3 9 7	13
	One-kangyee	1877-78	16	...	133 11 2	16 10 0	.....	11 0 0	161 5 2	10 1 3	16
	Beela-kat-kyee	1877-78	13	...	111 3 1	.....	.....	34 0 0	145 3 1	11 2 5	13
	Meh-nan-nweh	1877-78	23	...	68 9 6	.....	.....	78 1 6	146 11 0	6 6 0	23
	Meh-waing	1878-79	45	22	120 15 4	.....	33 7 0	42 7 7	196 13 11	2 15 0	67
ATTABAN ...	Dalee ..	1877-78	46	...	41 0 0	117 15 0	.....	53 5 0	213 4 0	4 9 9	46
	Total Tenasserim ...	.....	529	36	2,692 14 11	774 3 8	530 8 11	694 11 7	4,693 7 1	8 4 10	565
PROME ...	Choungzouk ...	1879-80	...	67	.....	.....	303 5 6	.....	303 5 6	4 8 5	67
THARRAWADDY ...	Bwet	1875 76	37·25	...	432 12 0	309 0 0	...	.....	.....	.....	.....
		1876-77	50	...	368 0 0		...	.....	.....	.....	.....
		1877-78	44	...	146 0 0		...	.....	.....	.....	.....
		1878-79	150	...	520 0 0	47 8 0	...	.....	.....	.....	.....
		...	281·25	...	1,466 12 0	356 8 0	... ...	... ...	1,823 4 0	6 7 9	218·25
	Shwaylay Yoma	1875-76	11·25	..	76 2 6	.....	.....	.....	76 2 6	6 14 9	11·25
	Nyanleh	1878-79	1	...	2 0 11	.....	.....	.....	.....	.....	.....
		1879-80	...	8			100 8 3	.....	.....	.....	... ..
		.....	1	8	2 0 11	.....	100 8 3	.....	102 9 2	11 6 4	9
	Toung-nyo Yoma	1875-76	15·25	...	134 10 3	59 8 0	.....	.....	194 2 3	12 15 0	15·25
	Thatcho	1869-70	7	..	70 0 0	.....	.....	.....	.....	.....	.....
		1870-71	8	...			.....	.....	.....	.....	.....
		...	15	...	70 0 0	.....	.....	.....	70 0 0	4 10 8	15
	Gwaydouk San	1875-76	10·75	...	220 9 6	160 8 0	.....	.....	.....	.....	.....
		1876-77	8·67	...			.....	.....	.....	.....	.....
		1878-79	7 5	...			.....	.....	.....	.....	... .
		. ....	27 12	...	220 9 6	160 8 0	.....	.....	381 1 6	14 1 8	27·12
	Minbco Bawbin	1875-76	15·25	...	117 14 3	10 0 0	.....	.....	127 14 3	8 8 10	15·25

Choungwa	1869-70 ...	17·								
	1873-74 ...	4·25								
	1874-75 ...	30·25								
	1876-77 ...	30·25	.	936 12 6	348 15 1	228 13 6	.....	.....	.. .	.....
	1877-78 ..	25·								
	1878-79 ...	25·5								
	1879-80 ...	..	18·1							
	...	133·025	18·1	936 12 6	348 15 1	228 13 6	.....	1,514 9 1	10 1 7	150·35
Kan-gyee	1878-79 ...	54·25	...	514 2 0	107 14 2	.....	.....	.....	.....	.....
	1879-80 ...	...	65·25	.....	.....	588 9 8	.....	.....	.....	.....
	...	54·25	65·25	514 2 0	107 14 2	588 9 8	.....	1,210 9 10	1 1 4	119·50
Toung Ga-mone and Minhla	1873-74 ...	45·5	. .	2,299 0 8	2,207 11 0	.....	.....	.....	.....	. ....
	1874-75 ...	80·75	...							
	1875-76 ...	105·55	...							
	...	231·80	...	2,299 0 8	2,207 11 0	. .....	.....	4,506 11 8	19 6 9	231·80
Moke-ka Beelin ...	1875-76 ...	37·75								
	1875-76 ...	4·								
	1869-70 ...	10·								
	1870-71 ...	12·								
	1871-72 ...	27·								
	1873-74 ...	159·38	...	5,448 9 8	2,606 15 2	.....	.....	.	.....	.....
	1874-75 ...	157·								
	1875-76 ...	28·75								
	1876-77 ...	155·								
	1877-78 ...	96·								
	1878-79 ...	102·25								
	1879-80 ...	...	85·5			639 14 0	.....	. ....	.....	.....
	..	769·13	85·5	5,448 9 8	2,606 15 2	639 14 0	.....	8,695 6 10	9 15 0	874·63
Koon Beelin	1879-80 ...	...	41·	.....	.....	348 4 6	.....	348 4 6	8 7 9	41·
Thone-zeh	1875-76 ...	18·93	...	.....	.....	.....	.....	.....	.....	.....
	1877-78 ...	38·	...							
	1878-79 ...	34·5	...							
	...	91·43	...	505 7 8	379 10 0	.....	.....	885 1 8	9 11 7	91·43
Total, Tharrawaddy ...	...	1664·98	217·85	11,792 1 11	6,237 9 5	1,906 1 11	.....	19,935 13 3	.....	1882·63
Total, Pegu Circle ..	...	1664·98	284·85	11,792 1 11	6,237 9 5	2,209 7 5	.....	20,239 2 9	.....	1949·84
Add Tenasserim Circle ...	...	529·	36·	2,692 14 11	774 3 8	530 8 11	694 11 7	4,692 7 1	.....	565·
GRAND TOTAL, BRITISH BURMA.	...	2193·98	320·85	14,485 0 10	7,011 13 1	2,740 0 4	694 11 7	24,931 9 10	.....	2514·83

* In Sin-zweh 356 acres cultivated in 1879-80, but results as stated in paragraph 16 of the report cannot be recorded till next year.

FORM No. 47.—*Area of forest tracts protected from fire during the dry season of 1880 (to accompany report for 1879-80).*

DIVISION.	FOREST TRACT.	UP TO JUNE 1879.		DURING DRY SEASON 1880.				TOTAL COST UP TO 31ST MAY 1880.	YEAR WHEN COMMENCED.	REMARKS.
		Area actually protected.	Cost up to 10th June 1879.	Area attempted.	Failure.	Actually protected.	Amount expended.			
			Rs. A. P.				Rs. A. P.	Rs. A. P.		
WEST SALWEEN.	Sin-zweh	8,960	1,270 1 0	8,960	100	8,860	989 13 6	2,259 14 6	1871	
	Wa-moo	240	20 0 0	1,920	...	1,920	10 0 0	30 0 0	...	
	Ka-hee-loo	1,280	20 0 0	1,280	...	1,280	60 0 0	80 0 0	1878	
	Ta-geh-loung	...	421 15 0	3,000	...	3,000	.....	468 15 0	1877	No payment made within the year.
	Beela-kat-kyee	...		4,160	...	4,160	47 0 0		...	
	One-kangyee	8,320	91 8 0	8,320	...	8,320	34 0 0	125 8 0	...	
	Meh-waing	8,320	3 0 0	3,840	...	3,840	3 0 0	6 0 0	1878	
	Meh-nan-nweh	3,840	30 0 0	810	799	11	30 0 0	60 0 0	...	
ATTARAN.	Dalee	810	.....	10,980	30	10,850	125 0 0	125 0 0	1880	
	Kyoon-choung	...								
	Total, Tenasserim Circle ...	31,770	1,856 8 0	43,170	929	42,241	1,298 13 6	3,155 5 6	...	

		Rs. A. P.
Charged in previous years	...	120 12 0
Do. do. 1876-77	...	298 15 0
Do. do. 1877-78	...	468 4 0
Do. do. 1878-79	...	968 9 0
Do. do. 1879-80	...	1,298 13 6
Total	...	3,155 5 6

FORM No. 47.—*Area of forest tracts protected from fire during the dry season of 1880. &c.*—(concluded).

DIVISION.	FOREST TRACTS.	UP TO JUNE 1879.		DURING DRY SEASON 1880.				TOTAL COST UP TO 31ST MAY 1880.	YEAR WHEN COMMENCED.	REMARKS.
		Area actually protected.	Cost up to 10th June 1879.	Area attempted.	Failure.	Actually protected.	Amount expended.			
			Rs. A. P.				Rs. A. P.	Rs. A. P.		
THABBAWADDY.	Moke-ka Beelin reserve	14,180	9,915 0 0	24,260	16	24,242	1,297 0 0	11,202 0 0	1873	
	Bawbin	614	2,778 0 0	614	17	597	154 0 0	2,932 0 0	1569	
	Myodwin	40	412 0 0	40	...	40	45 0 0	457 0 0	...	
	Bwet	1,926	2,493 0 0	2,886	...	2,886	816 0 0	3,309 0 0	1877	
	Kangyee	3,801	5,091 0 0	3,801	...	3,801	988 0 0	6,079 0 0	...	
	Nyanleh	5,240	7,546 0 0	5,840	600	5,240	1,237 0 0	8,783 0 0	...	
	Thone-zeh	92	50 0 0	2,180	...	2,180	120 0 0	170 0 0	...	
	Moke-ka	38	50 0 0	38	...	38	50 0 0	100 0 0	...	
	Minhla	229	275 0 0	232	...	232	310 0 0	555 0 0	...	
	Gway-douk-san	26	50 0 0	26	...	26	37 0 0	87 0 0	...	
RANGOON ...	Magayee plantation	1,306	14,590 0 0	1,306	...	1,306	1,386 0 0	15,976 0 0	1872	
	Ditto reserve	359		1,686	210	1,476			1868	
	Kyet-pyoo-gan	...		683	...	683				
PROME	Teak plantation	75	4,932 0 0	75	...	75	25 0 0	5,352 0 0	1857	
	Gway-cho reserve	...		...	...	...	...		..	
	Choungzouk	2,433		2,600	450	2,150	395 0 0		1879	
TOUNGOO ...	Pyoon-choung	3,440	3,121 0 0	3,440	...	3,440	415 0 0	3,536 0 0	1877	6 acres slightly burnt.
	Yaynay	5,760	1,630 0 0	5,760	...	5,760	273 0 0	1,903 0 0		
	Total, Pegu Circle ...	39,559	52,933 0 0	55,467	1,295	54,172	7,538 0 0	60,471 0 0		
	Add Tenasserim Circle ...	31,770	1,856 8 0	43,170	929	42241	1,298 13 6	3,155 5 6		
	GRAND TOTAL, BRITISH BURMA ...	71,329	54,789 8 0	98,637	2,224	96,413	8,836 13 6	63,626 5 6		

	Rs. A. P.
Charged in previous years ...	35,863 0 0
Ditto ditto 1877-78 ...	8,163 0 0
Ditto ditto 1878-79 ...	8,907 0 0
Ditto ditto 1879-80 ...	7,538 0 0
Total ...	60,471 0 0

FORM No. 48 [PRESCRIBED.]—*Prosecutions for breaches of forest rules for the year 1879-80.*

FOREST DIVISION AND CIVIL DISTRICT.	Injury to forests by fire.		Unauthorized felling or appropriation of wood and minor forest produce.		Grazing without permission, or in tracts in which grazing is prohibited.		Other offences.		Total				REMARKS.
									Prosecutions.		Convictions.		
	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
TENASSERIM CIRCLE.													
Salween Division—													
Salween district	1	2	.....	.....	.....	.....	.....	.....	1	2	1	2	
Amherst ditto	3	9	6	7	.....	.....	.....	.....	9	16	3	5	One case, one person, pending.
Total ...	4	11	6	7	.....	.....	.....	.....	10	18	4	7	One case, three persons, absconded.
South Tenasserim Division—													
Mergui district ...	.....	.....	1	1	.....	.....	.....	.....	1	1	1	1	
Total ...	.....	.....	1	1	.....	.....	.....	.....	1	1	1	1	
Kado Division—													
Kado	.....	.....	.....	.....	.....	.....	44	51	44	51	32	39	One case, one person, transferred to the District Magistrate; one case, one person, pending.
Total ...	.....	.....	.....	.....	.....	.....	44	51	44	51	32	39	
Total, Tenasserim Circle ...	4	11	7	8	.....	.....	44	51	55	70	37	47	
PEGU CIRCLE.													
Shway-gyin Division—													
Shway-gyin civil district	.....	.....	4	7	.....	.....	1	1	5	8	4	7	One fined Rs. 50, four Rs. 25 each, and one Rs. 5; one boat hull, teak, confiscated.
Total ...	.....	.....	4	7	.....	.....	1	1	5	8	4	7	
Western Division—													
Henzada and Bassein civil district ..	.....	.....	5	24	.....	.....	2	3	7	27	4	6	One case, in which 16 persons were charged, was dismissed.
Total ...	.....	.....	5	24	.....	.....	2	3	7	27	4	6	
Toungoo Division—													
Toungoo civil district	.....	.....	.....	.....	.....	.....	1	1	1	1	1	1	
Total ...	.....	.....	.....	.....	.....	.....	1	1	1	1	1	1	
Rangoon Division—													
Hanthawaddy civil district ...	.....	.....	4	4	.....	.....	.....	.....	4	4	2	2	
Total ...	.....	.....	4	4	.....	.....	.....	.....	4	4	2	2	

Prome Division—													
Tha-yet-myo civil district ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Prome ditto ...	.....	.....	1	9	.....	.....	.....	.....	1	9	1	9	Fines varying from Rs. 8 to 56 each.
Shwaylay township ...	.....	.....	2	4	.....	.....	.....	.....	2	4	2	4	
Total ...	.....	.....	3	13	.....	.....	.....	.....	3	13	3	13	
Tharrawaddy Division—	.....	.....	1	1	.....	.....	.....	.....	1	1	1	1	
	.....	.....	1	4	.....	.....	.....	.....	1	4	.....	.....	Discharged.
Tharrawaddy civil district ...	.....	.....	1	2	.....	.....	.....	.....	1	2	1	2	
	.....	.....	1	4	.....	.....	.....	.....	1	4	1	4	
	.....	.....	1	11	.....	.....	.....	.....	1	11	1	11	
	.....	.....	1	1	.....	.....	1	1	2	2	2	2	
	.....	.....	1	2	.....	.....	1	1	2	3	2	3	
	.....	.....	1	28	.....	.....	.....	.....	1	28	1	27	One discharged.
Prome civil district	.....	.....	1	20	.....	.....	.....	.....	1	20	1	14	Six ditto.
	.....	.....	1	1	.....	.....	.....	.....	1	1	1	1	
	.....	.....	1	2	.....	.....	.....	.....	1	2	1	2	
	.....	.....	1	3	.....	.....	.....	.....	1	3	1	3	
Total ...	.....	.....	12	79	.....	.....	2	2	14	81	13	70	
Total, Pegu Circle ...	.....	.....	28	137	.....	.....	6	7	34	134	27	99	
GRAND TOTAL ...	4	11	35	135	.....	.....	50	58	89	204	64	146	

FORM No. 49. [PRESCRIBED].—*Summary of revenue of the different divisions for the year 1879-80.*

Budget Heads.	Direction.	Agency Division.	Rangoon Division.	Tharrawaddy Division.	Prome Division.	Western Division.	Toungoo Division.	Shway-gyin Division.	Total Pegu Circle.	Salween Division.	Kado Revenue Division.	South Tenasserim Division.	Total Tenasserim Circle.	Grand total, British Burma.
RECEIPTS.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—														
a Timber	.....	4,80,223 3 4	.....	.....	2,412 4 0	3,107 5 0	3,099 4 0	425 11 7	4,89,027 12 8	1,96,540 1 11	.....	23,807 8 3	2,20,446 10 2	7,10,374 6 10
b Firewood and charcoal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
c Bamboos	.....	.....	.....	.....	.....	.....	.....	.....	.....	22 13 0	.....	.....	22 13 0	22 13 0
d Sandal-wood	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
e Grass and other minor produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—														
a Timber	.....	.....	23,291 3 1	9,314 9 6	8,272 0 9	8,474 12 5	6,500 6 0	4,160 12 4	60,103 12 1	18,010 8 0	2,036 4 0	1,055 3 2	21,101 15 2	81,205 11 3
b Firewood and charcoal	.....	.....	360 0 0	685 12 0	.....	709 13 0	20 0 0	765 0 0	2,540 9 0	.....	.....	.....	.....	2,540 9 0
c Bamboos	.....	.....	.....	1,012 6 3	.....	.....	.....	.....	1,012 6 3	.....	.....	.....	.....	1,012 6 3
d Grazing and fodder grass	.....	.....	.....	23 4 0	.....	.....	.....	.....	23 4 0	.....	.....	.....	.....	23 4 0
e Other minor produce	.....	262 11 0	476 14 0	8,209 4 3	36,503 8 0	1,222 0 0	2,405 8 0	809 0 0	50,008 13 3	53 0 0	.....	1,833 8 0	1,886 8 0	51,895 5 3
III.—CONFISCATED DRIFT AND WAIF WOOD	.....	9,206 10 0	127 1 0	194 0 0	.....	7,147 4 11	21,969 14 0	3,086 8 0	42,391 5 11	.....	46,800 6 0	778 4 0	47,578 10 0	89,969 15 11
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—														
a Duty on foreign timber and other forest produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2,32,692 14 0	.....	2,32,692 14 0	2,32,692 14 0
b Revenue from shared and private forests	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
V.—MISCELLANEOUS—														
a Fines and forfeitures	.....	.....	.....	690 0 0	.....	.....	125 0 0	.....	824 0 0	642 0 0	.....	23 0 0	665 0 0	1,489 0 0
b Refunds	.....	1,236 2 7	11 9 2	98 7 9	11 5 0	157 10 9	42 15 3	100 4 0	1,656 6 6	56 0 0	.....	.....	56 0 0	1,714 6 6
c Other sources	.....	2,898 11 6	12 0 0	1,108 0 0	124 8 0	121 5 1	304 7 3	1 0 0	3,569 15 10	490 3 0	3,025 0 0	165 0 0	3,670 3 0	7,240 2 10
Total of Receipts	.....	4,93,897 6 5	24,978 11 3	21,344 11 9	47,383 9 9	21,000 3 11	35,166 6 0	10,008 3 11	6,52,060 5 6	2,15,823 9 11	2,84,554 8 0	27,742 7 5	5,28,120 9 4	11,80,180 14 10

A—CONSERVANCY AND WORKS

I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—												
a Timber	15,035 0 8	7,685 7 5	1,12,839 5 6	40,039 14 2	1,782 10 6	74,602 8 7	2,868 13 10	2,54,871 5 8	1,13,463 2 2	224 3 0	4,249 14 0	1,17,936 3 8	3,72,807 9 4
b Firewood and charcoal		19 8 0						19 8 0					19 8 0
c Bamboos		240 0 0						240 0 0					240 0 0
d Sandal-wood													
e Grass and other minor produce													
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS	596 0 0	1,931 2 0	603 13 3	1,033 4 0	2,051 0 7		791 9 10	6,996 13 8					6,996 13 8
III.—CONFISCATED, DRIFT, AND WAIF WOOD	2,086 12 9	53 8 0		664 8 0	2,704 7 11	8,212 9 7	2,546 14 11	16,858 13 2		18,768 10 7	409 2 7	9,107 13 2	36,026 10 4
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—													
a Duty on foreign timber and other forest produce													
b Revenue from shared and private forests													
V—RENT OF LEASED FORESTS AND PAYMENTS TO SHARE-HOLDERS IN FORESTS MANAGED BY GOVERNMENT													
VI—LIVE-STOCK, STORES, TOOLS, AND PLANT—													
a Purchase of cattle	13,855 0 0							13,855 0 0					13,855 0 0
b Feed and keep of cattle	11,256 1 9	907 13 0	2,267 7 7	1,032 13 6	751 7 9	1,654 8 8	649 14 7	18,600 2 10	1,715 6 0		116 0 0	1,831 6 0	20,431 8 10
c Stores, tools, and plant	1,744 3 0	696 9 0	50 0 0	91 4 0	80 12 0	106 0 0	49 8 0	3,318 4 0	1,280 7 9	503 12 0	18 0 0	1,802 3 9	5,210 7 9
VII.—COMMUNICATIONS AND BUILDINGS—													
a Roads and bridges	392 14 9	1,142 9 6	362 15 0	4 0 0				1,902 7 3	47 0 0			47 0 0	1,949 7 3
b Buildings	651 4 9	4,987 4 8	15,715 12 10	2,039 2 0		559 8 0	250 4 0	24,213 4 3	899 8 0	83 10 0	47 0 0	1,030 3 0	25,242 6 3
c Other works	133 5 0		553 13 3					687 2 3	151 10 6		25 15 3	177 9 9	864 12 0
VIII.—DEMARCATION; IMPROVEMENT AND EXTENSION OF FORESTS—													
a Demarcation	2,332 6 9	123 12 0	2,031 10 8	3,009 3 6		1,296 0 6	38 10 0	8,831 11 5	3,771 8 0			3,771 8 0	12,603 3 5
b Compensation for land and rights		435 0 0						435 0 0	70 0 0			70 0 0	505 0 0
c Surveys and working plans	10 0 0	50 4 0				56 2 0		116 6 0	383 1 0			383 1 0	499 7 0
d Plantations	262 9 0	7,258 10 6	3,903 3 5	782 15 6	316 13 8	900 1 8		13,614 4 1	1,062 3 10			1,062 3 10	13,676 7 11
e Protection from fire		2,089 4 10	4,961 0 11	414 8 0				9,265 5 0	251 0 0			251 0 0	9,536 5 0
f Other works			2,038 6 0	195 8 0				2,733 14 0	3,967 0 6			3,967 0 0	6,700 14 6

Form No. 19.—*Summary of expenditure of the different divisions for the year 1879-80.*

Budget Heads.	Direction.	Agency Division.	Rangoon Division.	Tharrawaddy Division.	Prome Division.	Western Division.	Toungoo Division.	Shway-gyin Division.	Total Pegu Circle.	Salween Division.	Kado revenue Division.	South Tenasserim Division.	Total Tenasserim Circle.	Grand Total British Burma.
X.—Miscellaneous—	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
a Refunds	.....	142 9 6	.....	.....	100 0 0	47 3 0	10 0 0	.....	299 12 6	.....	.....	.....	.....	299 12 6
b Law charges	.....	.....	.....	.....	.....	.....	38 0 0	112 3 0	150 3 0	20 0 0	.....	.....	20 0 0	170 3 0
c Other charges	.....	353 6 0	19 12 0	47 12 0	21 14 0	4 0 0	8 15 0	146 8 0	597 3 0	215 7 0	8 0 0	1,236 3 0	1,459 10 0	2,056 13 0
Total A.—Conservancy and Works ...	.....	49,452 2 11	28,530 8 11	1,46,055 10 5	49,418 14 8	7,921 9 9	97,756 3 3	7,480 6 2	3,76,625 8 1	1,27,297 6 9	19,009 3 7	6,101 3 4	1,53,066 13 8	5,29,092 5 0
B.—ESTABLISHMENT.														
I.—Salaries—														
a Conservators	10,443 0 10	.....	.....	.....	.....	.....	823 7 0	.....	11,266 7 10	16,800 0 0	.....	.....	16,800 0 0	28,066 7 10
b Superior officers	.....	9,491 13 2	10,767 0 7	6,000 0 0	7,306 5 4	4,525 0 0	9,884 4 10	2,506 7 2	50,472 15 1	23,749 15 11	3,000 0 0	.....	26,749 15 11	77,222 15 0
c Subordinate forest and depôt establishments ...	.....	4,410 3 9	1,277 7 0	7,218 0 3	5,670 7 9	1,648 10 1	4,411 0 1	3,207 15 2	27,633 12 1	4,080 8 0	2,808 0 0	.....	7,788 8 0	35,422 4 1
d Office establishments	14,739 6 2	1,200 0 0	2,372 1 1	2,703 10 3	2,148 0 0	1,207 12 8	1,553 14 11	215 7 2	26,160 4 3	6,380 0 0	5,220 0 0	.....	13,000 0 0	39,760 4 3
e Deputation and special allowances ...	233 5 3	.....	.....	.....	.....	.....	.....	.....	233 5 3	.....	.....	.....	.....	233 5 3
II.—Travelling allowances—														
a Conservators	3,535 2 4	.....	.....	.....	.....	.....	.....	.....	3,535 2 4	2,097 0 0	.....	.....	2,097 0 0	5,632 2 4
b Superior officers	.....	3,317 11 10	5,207 15 5	2,328 12 0	920 14 8	2,267 4 0	3,188 3 10	1,305 6 7	19,856 4 4	7,073 6 5	.....	.....	7,073 6 5	26,929 10 9
c Subordinate forest and depôt establishments ...	.....	184 4 11	.....	62 8 0	.....	4 0 0	.....	.....	257 12 11	.....	.....	.....	.....	257 12 11
d Office establishments...	45 9 5	.....	347 8 4	336 12 5	35 7 11	264 12 7	73 3 6	.....	1,101 4 2	137 5 9	.....	.....	137 5 9	1,238 0 11
III.—Contingencies—														
a Stationery	401 10 0	104 8 0	1 12 0	5 8 0	.....	.....	5 4 0	.....	516 10 0	8 0 0	.....	.....	8 0 0	526 10 0
b Carriage of tents and records	.....	.....	61 10 0	4 12 0	.....	90 8 0	0 8 0	48 12 0	206 2 0	.....	.....	.....	.....	206 2 0
c Rents, rates. and taxes	.....	643 11 0	438 0 0	—	27 10 3	.....	.....	3 0 0	1,112 5 3	630 1 8	19 9 5	.....	649 11 1	1,762 0 4
d Pay of police guards	.....	.....	.....	.....	.....	.....	10 8 11	.....	10 8 11	.....	.....	.....	.....	10 8 11
e Official postage	324 5 0	83 7 0	22 8 0	38 12 0	45 15 0	72 10 0	35 10 0	22 0 6	645 3 6	93 4 0	.....	.....	93 4 0	738 7 6
f Sundries	1,436 10 3	1,556 1 9	284 9 0	203 4 0	407 0 6	141 10 0	178 0 0	66 8 0	4,303 11 6	1,427 6 10	.....	.....	1,427 6 10	5,731 2 4
Total B.—Establishment ...	31,177 1 3	20,901 13 5	20,770 5 5	18,908 14 11	17,858 13 5	10,187 3 4	20,103 1 1	7,375 8 7	1,47,372 13 5	65,877 0 7	11,047 9 5	.....	76,424 10 0	2,23,797 7 5
Grand Total of Expenditure ...	31,177 1 3	70,444 0	49,300 14 4	1,64,969 9 4	67,272 12 1	18,058 13 1	1,07,019 4 4	14,855 14 9	5,23,998 5 6	1,92,074 7 4	30,715 13 0	6,101 3 4	2,29,491 7 8	7,53,489 13 9

Dr. FORM No. 50.—[PRESCRIBED].—*Account current of the Forest Department, British Burma, for the official year 1879-80.* *Cr.*

	Tenasserim circle.	Pegu circle.	Total, British Burma.		Tenasserim circle.	Pegu circle.	Total, British Burma.
	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.
To cash balance on 1st April 1879 ...	889 5 1	5,060 13 5	5,950 2 6				
To III., Forest revenues	5,28,120 9 4	6,52,069 5 6	11,80,189 14 10	By expenditure under A.	1,53,066 13 8	3,76,625 8 1	5,29,692 5 9
„ forest cash remittances	2,24,574 3 6	5,03,273 3 10	7,27,847 7 4	„ ditto under B.	76,424 10 0	1,47,372 13 5	2,23,797 7 5
„ inter-divisional transfers	600 0 0	36,130 8 9	36,730 8 9	„ forest cash remittances	4,44,355 6 11	6,43,458 8 9	10,87,813 15 8
„ Government of Bengal remittance	.....	10 7 2	10 7 2	„ revenue, Government of India	25,711 14 9	.....	25,711 14 9
„ ditto of India Mathematical Instrument Department ...	228 11 0	311 12 0	540 7 0	„ inter-divisional transfers	600 0 0	36,981 9 0	37,581 9 0
„ Military (Medical) Department, Rangoon	.....	660 3 0	660 3 0	„ Public Works Department, British Burma	.....	4,444 10 9	4,444 10 9
„ do. (do.) do., Madras	.....	37 12 6	37 12 6	„ Jail Department, British Burma	5,665 10 0	3,925 13 11	9,591 7 11
„ do. Department, Madras	700 7 0	.....	700 7 0	„ Telegraph do., ditto	.....	61 11 6	61 11 6
„ Public Works Department, British Burma	.....	2,470 3 3	2,470 3 3	„ Military do., Madras	42,509 6 3	.....	42,509 6 3
„ Jail Department, British Burma	149 6 0	13 8 0	162 14 0	„ do. do., Bombay	9,879 13 0	.....	9,879 13 0
„ Government of India, XXIII., Miscellaneous unclaimed deposits	172 12 0	4,784 15 5	4,957 11 5	„ advances recoverable	17,713 0 0	2,48,745 0 10	2,66,458 0 10
Contributions to funds—				„ suspense account	.....	91 0 0	91 0 0
Uncovenanted Service Family Pension Fund	764 14 0	965 10 0	1,730 8 0	„ provincial service charges	.....	4,904 4 4	4,904 4 4
Civil Service Fund (ordinary)	.....	56 2 1	56 2 1	„ deposit repayments	172 12 0	4,853 15 9	5,026 11 9
Madras Military Fund	747 13 0	.....	747 13 0				
Military Department, Bengal Fund	60 0 0	.....	60 0 0				
To advances recoverable	19,603 1 0	2,73,820 5 9	2,93,423 6 9				
„ suspense account	.....	67 0 0	67 0 0	*Cash balance on 31st March 1880* ...	511 11 4	8,606 14 4	9,118 9 8
„ deposit receipts	.....	340 0 0	340 0 0				
Total ...	7,76,611 1 11	14,80,071 14 8	22,56,683 0 7	Total ...	7,76,611 1 11	14,80,071 14 8	22,56,683 0 7

FORM No. 51.—[PRESCRIBED].—*Statement of outstandings and liabilities on account of contractors and disbursers 1879-80.*

DIVISION.	DEPARTMENT DEBTOR.			DEPARTMENT CREDITOR.			BALANCE DUE.		REMARKS.	
	At commencement of year.	Recoveries in cash, and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during year.	At close of year.	To department (outstandings).	By department (liabilities.)		
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.
Government Timber Depôt and Agency Office ...	.....	30,706 1 2	30,706 1 2	3,485 13 6	30,008 1 10	33,493 15 4	2,787 14 2	.....	(a) Total credited in form No. 50 under advances recoverable ...	2,73,920 5 9
Rangoon	.....	38,440 7 10	38,440 7 10	7,481 15 3	39,200 3 1	46,682 2 4	8,241 10 6	.....	*Add* recoveries in adjustment of advances charged to budget heads prior to 1st April 1877 Rs. 150 0 0	
Tharrawaddy	38 0 0	1,11,707 1 7	1,11,745 1 7	28,531 13 4	92,515 3 3	1,21,047 0 7	9,301 15 0	.....	Outstandings charged to budget heads prior to 1st April 1877, written off under Chief Commissioner's No. 271, dated the 15th January 1880 Rs. 2,769 15 0...	2,919 15 0
Prome	.....	37,069 3 2	37,069 3 2	10,562 14 5	37,435 8 0	47,998 6 5	10,929 3 3	.....	Total ...	2,76,740 4 9
Western	.....	3,935 4 8	3,935 4 8	5,664 0 0	3,422 7 8	9,086 7 8	5,151 3 0	.....	(b) Total debited in form No. 50 under advances recoverable ...	2,48,745 0 10
Toungoo	.....	52,562 14 4	52,562 14 4	13,314 6 8	45,359 6 0	58,673 12 8	6,110 14 4	.....	*Add* amount charged to budget heads in part clearance of item at debit of the [department on 1st April 1877 ...	38 0 0
									Total ...	2,48,783 0 10
Shway-gyin	.....	2,319 4 0	2,319 4 0	1,557 4 0	842 3 0	2,309 7 0	80 3 0	.....	(c) Includes Rs. 60-8-0 charged to budget heads prior to 1st April 1877 in the Prome division.	
Total ...	38 0 0	(a) 2,76,740 4 9	2,76,778 4 9	70,596 3 2	(b) 2,48,783 0 10	3,19,381 4 0	(c) 42,602 15 3	.....		

Form No. 52. [Prescribed].—*Statement of outstandings on account of revenue for the year 1879-80.*

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total.	Amount realised during year.	Balance due to the department at end of year.	Remarks.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Salween	Squares, teak logs, padouk, scantling	92,684 7 1	56,058 0 3	1,48,742 7 4	* 1,39,960 8 4	8,781 15 0	* Includes the value of the Admiralty cargo, *viz.*, Rs. 92,224-7-5, and which has been adjusted in the Home accounts.
Kado Revenue ...	Drift teak timber...	.....	36,902 12 0	36,902 12 0	36,902 12 0	....	
South Tenasserim ...	Sleepers, sale of drift timber, &c, ...	.....	24,830 12 3	24,830 12 3	24,830 12 3	....	
	Total, Tenasserim Circle ...	92,684 7 1	1,17,791 8 6	2,10,475 15 7	2,01,694 0 7	8,781 15 0	
Tharrawaddy ...	I. Sale of timber	....	....	.....	.....	.....	
	II. Timber removed from forests, &c. ...						
	a. Timber	.....	9,314 9 6	9,314 9 6	9,314 9 6	.....	
	b. Firewood and charcoal	.....	685 12 0	665 12 0	665 12 0	.....	
	c. Bamboos	.....	1,012 6 3	1,012 6 3	1,012 6 3	.....	
	d. Grazing and fodder grass	.....	23 4 0	23 4 0	23 4 0	.....	
	e. Other minor produce	.....	8,209 4 3	8,209 4 3	8,209 4 3	.....	
	III. Confiscated, drift, and waif wood	.....	194 0 0	194 0 0	194 0 0	.....	
	V. *a.* Fines and forfeitures	.....	699 0 0	699 0 0	699 0 0	.....	
	b. Refunds	.....	98 7 9	98 7 9	98 7 9	.....	
	c. Other sources	.....	1,106 0 0	1,106 0 0	1,106 0 0	.....	
	Total ...	.....	21,344 11 9	21,344 11 9	21,344 11 9	.....	
Rangoon	I. Sale of timber	.....	....	....	.....	.....	
	e. Grass and other minor produce	.....	....	....	.....	.....	
	II. Timber and other produce removed from forests, &c,						
	a. Timber	.....	23,291 3 1	23,291 3 1	23,291 3 1	.....	
	b. Firewood and charcoal	.....	360 0 0	360 0 0	360 0 0	.....	
	c. Other minor produce	.....	476 14 0	476 14 0	476 14 0	.....	
	III. Confiscated drift and waif wood	.....	127 1 0	127 1 0	127 1 0	.....	
	V. *b.* Refunds	.....	11 9 2	11 9 2	11 9 2	.....	
	c. Other sources	.....	12 0 0	12 0 0	12 0 0	.....	
	Total ...	.....	24,278 11 3	24,278 11 3	24,278 11 3	.....	
Prome ...	I. Sale of timber	....	2,412 4 0	2,412 4 0	2,412 4 0	.....	
	II. Timber removed from forests, &c.						
	a. Timber	.....	8,272 0 9	8,272 0 9	8,272 0 9	.....	
	e. Other minor produce	.....	36,563 8 0	36,563 8 0	36,563 8 0	.....	
	V. *b.* Refunds	.....	11 5 0	11 5 0	11 5 0	.....	
	c. Other sources	.....	124 8 0	124 8 0	124 8 0	.....	
	Total ...	.....	47,383 9 9	47,383 9 9	47,383 9 9	.....	
	Carried over ...	.....	93,007 0 9	93,007 0 9	93,007 0 9	.....	

FORM No. 52.—*Statement of outstandings on account of revenue, &c.*—(concluded).

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total.	Amount realized during year.	Balance due to the department at end of year.	Remarks.
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
	Brought forward ..	.....	93,007 0 9	93,007 0 9	93,007 0 9	.....	
WESTERN ...	I. Sale of timber	33 0 0	6,748 5 9	6,781 5 9	3,200 5 9	3,581 0 0	
	II Timber removed from the forests, &c.						
	a. Timber	.....	8,474 12 5	8,474 12 5	8,474 12 5	.....	
	b. Firewood and charcoal	.....	709 13 0	709 13 0	709 13 0	.....	
	c. Other minor produce	.....	1,222 0 0	1,222 0 0	1,222 0 0	.....	
	III. Confiscated drift and waif wood	.....	7,147 4 11	7,147 4 11	7,147 4 11	.....	
	V. b. Refunds	.....	157 10 9	157 10 9	157 10 9	.....	
	c. Other sources	.....	121 5 1	121 5 1	121 5 1	.....	
	Total ...	33 0 0	24,581 3 11	24,614 3 11	21,033 3 11	3,581 0 0	
TOUNGOO	I. Sale of timber	.....	3,699 4 0	3,699 4 0	3,699 4 0	.....	
	II. Timber removed from the forests, &c.						
	a. Timber	.....	6,590 6 0	6,590 6 0	6,590 6 0	.....	
	b. Firewood and charcoal	.....	29 0 0	29 0 0	29 0 0	.....	
	c. Other minor produce	.....	2,405 8 0	2,405 8 0	2,405 8 0	.....	
	III. Confiscated drift and waif wood	.....	21,969 14 0	21,969 14 0	21,969 14 0	.....	
	V.a. Fines and forfeitures	.....	125 0 0	125 0 0	125 0 0	.....	
	b. Refunds	.....	42 15 3	42 15 3	42 15 3	.....	
	c. Other sources	.....	304 7 3	304 7 3	304 7 3	.....	
	Total ...	.....	35,166 6 6	35,166 6 6	35,166 6 6	.....	
SHWAY-GYIN	I. Sale of timber	.....	425 11 7	425 11 7	425 11 7	.....	
	II. Timber removed from the forests, &c.						
	a. Timber	.....	4,160 12 4	4,160 12 4	4,160 12 4	.....	
	b. Firewood and charcoal	.....	765 0 0	765 0 0	765 0 0	.....	
	c Other minor produce	.....	869 0 0	869 0 0	869 0 0	.....	
	III. Confiscated drift and waif wood	.....	3,686 8 0	3,686 8 0	3,686 8 0	.....	
	V.a. Refunds	.....	100 4 0	100 4 0	100 4 0	.....	
	c. Other sources	.....	1 0 0	1 0 0	1 0 0	.....	
	Total ...	....	10,006 3 11	10,006 3 11	10,006 3 11	.....	
AGENCY	I. Sale of timber	9,084 0 0	4,80,223 3 4	4,89,307 3 4	4,76,881 3 4	12,426 0 0	
	II.c. Other minor produce	.....	262 11 0	262 11 0	262 11 0	.....	
	III. Confiscated drift and waif wood	.....	9,266 10 0	9,266 10 0	9,266 10 0	.....	
	V.b. Refunds	.....	1,236 2 7	1,236 2 7	1,236 2 7	.....	
	c. Other sources	.....	1,898 11 6	1,898 11 6	1,898 11 6	.....	
	Total ...	9,084 0 0	4,92,987 6 5	5,01,971 6 5	4,89,545 6 5	12,426 0 0	
	Total, Pegu Circle ...	9,117 0 0	6,55,650 5 6	6,64,767 5 6	6,48,760 5 6	16,007 0 0	
	Total, Tenasserim Circle ...	92,684 7 1	1,17,791 8 6	2,10,475 15 7	2,01,694 0 7	8,781 15 0	
	GRAND TOTAL, BRITISH BURMA ...	1,01,801 7 1	7,73,441 14 0	8,75,243 5 1	8,50,454 6 1	24,788 15 0	

FORM No. 55—[PRESCRIBED].—*Statement of timber and other produce worked out from the different forest divisions, 1879-80.*

Division.	Forest	Description of timber, &c.	Logs.	Number of. Sawn timber.	Number of. Cubic feet.	Total of each division. Logs.	Total of each division. Sawn timber.	Cubic feet.
Salween.	III. Division ...	... ...	800	...	32,347			
	Thoung-yin ...	.....	4,992	...	212,687			
	Houng-tharaw ...	Crooks ...	179	...	1,700			
	Kolone ...	.....	590	...	4,833			
	Pandaw ...	.....	915	...	9,350			
	Attaran ...	Pieces ...	244	...	4,880			
	Minelonegyee ...	.....	14	15	1,705			
	Karennee ...							
	Total teak ...	.....	7,704	15	267,542	7,704	15	267,542
		II.—Other kinds.						
Salween.	Attaran	Padouk	1,642	...	9,472			
	Do.	Pyngado	344	...	7,506			
	Do.	Pyin-ma	34	...	810			
	Yinbaing	Thitka	176	...	16,183			
	Do.	Thitkado	28	...	3,691			
	Thoung-yin ...	Pine	1	...	87	2,225	...	37,749
	Attaran and Woot-kyee	Hardwood sleepers ...	3,140	...	10,873	3,140	...	10,873
South Tenasserim.	Mergui	Kanyin	1	...	40	1	...	40
	Mergui and Tavoy ...	Hardwood sleepers ...	4,880	...	16,808			
	Mergui	Ditto	127	...	450	5,007	...	17,348
	Total other kinds ...	.....	...	...	...	10,373		66,010
	Total Tenasserim ...	.....	...	...	...	18,077	15	333,552
Tharrawaddy.	Shwaylay ...	.....	216					
	Toung-nyo ...	.....	1,074					
	Minboo	.....	217					
	Bawbin	.....	309					
	Toung, Ga-mone, and Myoung	.....	117					
	Minhla	.....	69					
	Moke-ka	.....	232					
	Beelin	.....	288					
	Thone-zeh	.....	247					
			2,850	...	131,400	2,850	...	131,400
Rangoon.	Pegu	.....	415	...	19,171	415	...	19,171
Toungoo.	Boneko-gwa ...	.....	290					
	Yaynay	.....	4					
	Swa	.....	139					
	Thaing	.....	348					
	Pyoo	.....	362					
	Kaboung	.....	655					
	Myohla	.....	29					
	Koon	.....	2,054					
			3,881	...	185,518	3,881	...	185,518
Prome.	Mindone	.....	665					
	Nawin	.....	1,973					
	Boot-leh	.....	1,014					
			3,652	...	165,370	3,652	...	165,370
	Total of teak ...	.....	...	...	...	10,807	...	501,439
		II.—Other kinds.						
Toungoo.	Boneko-gwa ...	Thitka	72					
	Kaboung	Do.	125					
	Samo	Do.	100					
	Swa	Do.	5					
	Myohla	Do.	1					
	Thaing	Do.	13					
	Total, other kinds...	.....	316	...	14,220	316	...	14,220
	Total, Pegu Circle...	.....	...	...	...	11,123	...	515,659
	Total, British Burma ...	.....	...	...	...	*29,200	15	849,231

N. B.—2,052 logs from the Attaran and Pandaw forests, Tenasserim Circle, and 600 Pegu Circle, are not included in this Statement, as the timber was worked out by private parties.

FORM No. 55 A.—[PRESCRIBED].—*Statement of timber and other produce brought to depôt at the different Forest Divisions, 1879-80.*

DIVISION.	FOREST.	Description of timber, &c.	Logs.	NUMBER OF		TOTAL OF EACH DIVISION.		Cubic feet.
				Sawn timber.	Cubic feet.	Logs.	Sawn timber.	
		I.—TEAK.						
Contractors' timber—								
Toungoo	Swa and Thaing ...	...	437	...	...	...	...	...
Prome	Nawin	...	305	...	...	...	...	...
Shway-gyin	Samo	...	49	...	...	...	...	...
Total ...	.....	...	791	...	31,985	791	...	31,985
Drift confiscated and waif—								
Toungoo	.....	...	6,321	...	...	...	...	...
Prome	.....	...	113	...	...	...	...	...
Tharrawaddy	.....	...	31	...	...	...	...	...
Agency	.....	...	644	36	...	...	...	...
Shway-gyin	.....	...	1,417	...	...	...	...	...
Western	.....	...	309	...	...	...	...	...
Total ...	....	Pegu ...	8,835	36	402,369	8,835	36	402,369
Kado	.....	...	4,573	...	1,14,900	...	...	...
S. Tenasserim	Morgui	...	26	...	2,185	...	...	...
Total ...	.....	Tenasserim...	4,598	...	1,16,485	4,598	...	116,485
Total ...	.....	...	14,224	36	5,50,839	14,224	36	550,839
		II.—OTHER KINDS.						
Western	Bassein	Thitka ...	78	...	...	...	...	...
		Pyin-ma ...	1	...	...	...	...	...
Total ...	.....	...	79	...	3,162	...	...	...
	.....	Pyngado ...	80	...	...	...	...	...
	.....	Shaw ...	22	...	...	...	...	...
	.....	Binga ...	12	...	...	...	...	...
Tharrawaddy	.....	Nabay ...	20	...	...	...	...	...
	.....	Thitpayoung..	18	...	...	...	...	...
	.....	All others ...	13	...	...	...	...	...
Total ...	.....	...	115	...	1,203	194	...	4,455
Agency	.....	Scantlings ...	...	315	271	...	315	271
Drift confiscated and waif—								
	.....	Thitka ...	6	...	...	...	...	...
	.....	Kanyin ...	2	...	...	...	...	...
Agency	.....	In ...	9	...	...	...	...	...
	.....	Pyin-ma ...	4	...	...	...	...	...
	.....	All others ...	8	...	...	...	...	...
Total ...	.....	...	29	...	1,336	29	...	1,336
Western	.....	All others ...	4	...	160	4	...	160
Total ...	.....	...	227	315	6,222	227	315	6,222
Attaran, Tenasserim Circle ...	.....	Bamboo ...	760	...	...	760	...	...
Pegu Circle	.....	...	2,03,361	...	...	2,03,361	...	...
Ditto.	.....	Canes ...	18	...	...	18	...	...
Total ...	.....	...	2,04,639	...	...	2,04,639	...	...
GRAND TOTAL ...	.....	...	...	...	...	2,19,090	351	557,061

Form No. 56.—*Account of timber and other produce for the year 1879-80.*

Particulars.	Tenasserim. Pieces. Number.	Tenasserim. Pieces. Cubic feet.	Pegu. Pieces. Number.	Pegu. Pieces. Cubic feet.	British Burma. Total. Number.	British Burma. Total. Cubic feet.
Balance in hand at commencement of year ...	92,452	3,764,102	21,427	975,350	113,879	4,739,452
Teak.						
Number of teak logs brought from the forests by contractors and Government agency ...	7,704	266,787	11,598	533,444	19,302	800,231
Confiscated drift and waif logs	4,598	116,485	8,871	402,369	13,469	518,854
Transfer from Kado drift timber register ...	117	5,355	...	...	117	5,355
Scantling	15	755	...	...	15	755
Refuse teak warked out	...	...	402	6,396	402	6,396
Number of logs entered during official year 1879-80.	114,492	4,579,710	...	...	114,492	4,579,710
Number of logs in transit at the close of year, and here brought to account	...	...	509	22,905	509	22,905
Timber worked out by purchasers, &c.	...	...	233	3,123	233	3,123
From all other sources	...	...	55	1,615	55	1,615
Other kinds.						
Woods of other kinds	2,226	37,789	510	18,675	2,736	56,464
Do. do., scantling	...	...	315	271	315	271
Do. do., drift and waif	...	...	33	1,496	33	1,496
Hardwood sleepers	8,147	28,221	...	...	8,147	28,221
Bamboos	760	...	203,861	...	204,621	...
Canes	...	...	18	...	18	...
Total ...	230,511	8,799,204	247,832	1,965,644	478,343	10,764,848

Particulars.	Tenasserim. Pieces. Number.	Tenasserim. Pieces. Cubic feet.	Pegu. Pieces. Number.	Pegu. Pieces. Cubic feet.	British Burma. Total. Number.	British Burma. Total. Cubic feet.
Teak.						
Number of logs and pieces sold during the year...	13,011	477,286	18,568	851,720	31,579	1,329,006
Squares	30	750	...	...	30	750
Scantling	T 21	1,099	...	...	T 21	1,099
Logs converted into scantling	40	1,800	...	...	40	1,800
Logs delivered to claimants	...	...	7,264	334,204	7,264	334,204
Drift timber delivered to claimants	1,772	67,336	...	...	1,772	67,336
Logs gone adrift during year...	...	...	456	20,976	456	20,976
Number of logs cleared during official year 1879-80	123,982	5,579,195	...	...	123,982	5,579,195
Lost during the year	...	...	30	1,200	30	1,200
Transfers to Salween Division Forest Office ...	117	5,355	...	...	117	5,355
Used for Government purposes	3	162	...	...	3	162
Other kinds.						
Woods of other kinds sold during the year ...	2,721	68,846	1,861	65,126	4,582	133,972
Hardwood sleepers	6,086	21,071	...	...	6,086	21,071
Logs converted into sleepers	87	1,852	...	...	87	1,852
Timber decayed	8	91	...	...	8	91
Bamboos	760	...	203,861	...	204,621	...
Canes	..	...	18	...	18	...
By balance on 31st March 1880	81,873	2,574,361	15,774	692,418	97,647	3,266,779
Total ...	230,511	8,799,204	247,832	1,965,644	478,343	10,764,848

N. B.—The total out-turn of the Pegu Circle (consisting of 11,598, 8,871, 402, 233, 55, 510, 315, and 33 as shown above) is ... 22,017 inclusive of drift timber.

The total out-turn of the year (consisting of 7,704 4,598 15 2,225, 8,147 logs and pieces) is ... ... 22,690 ditto ditto.

FORM No. 59.—*Statement showing the revenue derived from, and expenditure incurred on, timber and other produce sold to Public Departments from Depôt during the year 1879-80.*

Division.	Name of department.	Particulars of supplies.	Amount supplied.	Rate. At	Rate. Per	Amount of Revenue. Due.	Received.	Outstanding.	Cost to Forest Department. Timber expenses under A. I.	Quota of all other expenditure chargeable against timber, &c.	Total.	Comparison of Revenue and Expenditure. Surplus.	Deficit.	Remarks.
			Tons Ft. In. P.	Rs. A.	Ton	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. p.	Rs. A. P.	Rs. A. P.	
SALWEEN.	Gun-carriage Factory, Madras	309 logs of teak ...	420 25 8 0	90 0	,,	37,846 2 10	37,846 2 10	.....	20,442 3 10	972 8 4	21,414 12 2	16,386 8 1	.....	
		10 spars	13 48 3 9	140 0	,,	1,955 1 5	1,955 1 5	.....						
		18 logs padouk ...	19 17 2 3	140 0	,,	2,708 2 0	2,708 2 0	.....	1,279 8 0	.....	1,279 8 0	1,428 10 0	.....	
		Total ...	452 91 1 3	.....	...	42,509 6 3	42,509 6 3	.....	21,721 11 10	972 8 4	22,694 4 2	19,815 2 1	.....	
	Gun-carriage Factory, Bombay	200 logs padouk ...	149 14 8 5	125 0	Ton	18,661 12 0	9,879 13 0	8,781 15 0	9,570 11 0	486 4 2	10,056 15 2	8,604 13 10	.....	
		Total ...	149 14 8 5	.....	...	18,661 12 0	9,879 13 0	8,781 15 0	9,570 11 0	486 4 2	10,056 15 2	8,604 13 10	.....	
	Jail Department, Moulmein	100 logs thitka ...	130 0 0 0	12 0	Log	1,200 0 0	1,200 0 0	.....	1,014 1 0	.....	1,014 1 0	185 15 0	.....	
		52 ,, teak ...	48 0 0 0	From 10 0-0 to 27-8	,,	744 8 0	744 8 0	.....	537 0 11	.....	537 0 11	207 7 1	.....	
		134 ,, padouk ...	50 6 0 0	10 0	,,	1,340 0 0	1,340 0 0	.....	1,260 0 0	.....	1,260 0 0	659 5 0	.....	
		13 ,, do. ...	12 43 8 0	45 0	Ton	579 5 0	579 5 0	.....						
		1 ,, pyin-ma ...	0 16 0 0	5 0	Log	5 0 0	5 0 0	.....	.....	.....	.....	5 0 0	.....	
		263 padouk log ends.	.....	0 3	End	49 5 0	49 5 0	.....	.....	.....	.....	49 5 0	.....	
		Total ...	240 65 8 0	.....	...	3,918 2 0	3,916 2 0	.....	2,811 1 11	.....	2,811 1 11	1,107 0 1	.....	
KADO.	Jail Department	148 logs teak ...	126 1 2 4	From 8-8 to 18-8	Log	1,747 8 0	1,747 8 0	.....	.....	614 7 10	614 7 10	1,133 0 2	.....	
		Total ...	126 1 2 4	.....	...	1,747 8 0	1,747 8 0	.....	.....	614 7 10	614 7 10	1,133 0 2	.....	
		Total, Tenasserim ...	970 22 9 0	.....	...	66,836 12 3	58,054 13 3	8,781 15 0	34,103 8 9	2,073 4 4	36,176 13 1	30,659 15 2	.....	
			No. C. ft.											
PROME.	Executive Engineer, Henzada	Teak logs ...	17 899	50 0	Ton	899 0 0	899 0 0	.....	216 10 0	61 14 10	278 8 10	620 7 2	.....	
	Police Department, Prome...	Ditto	114 2,990	15 0	,,	897 0 0	897 0 0	.....	507 13 0	149 8 0	657 5 0	239 11 0	.....	
	Executive Engineer, Prome.	Duty on in logs ...	3,998 13,568	2 0	,,	542 7 0	542 7 0	.....	.....	271 5 9	271 5 9	271 1 3	.....	
		Trade permit for in trees ...	1,698 ...	0 4	Each	424 8 0	424 8 0	.....	.....	.....	.....	424 8 0	.....	
	Assistant Superintendent of Telegraphs, Prome ...	Fee and duty on thitya logs ...	... 110	4 8	Ton	10 0 0	10 0 0	.....	.....	4 6 4	4 6 4	5 9 8	.....	
			20 ...	0 8	Each	10 0 0	10 0 0	.....	.....	.....	.....	10 0 0	.....	
		Total ...	5,247 17,567	.....	...	2,782 15 0	2,782 15 0	.....	724 7 0	487 2 11	1,211 9 11	1,571 5 1	.....	

				No.	C. ft.										
THARRAWADDY.	Sub-Assistant Superintendent of Telegraphs ...	Pyingado	...	20	...	1 0	Each	20 0 0	20 0 0	.....	.....	.....	.....	20 0 0	.....
	Public Works Department, Rangoon division ...	Do. ...	...	2,490	...	0 8	„	1,245 0 0	1,245 0 0	.....	.....	.....	.....	1,245 0 0	.....
		Thit-ya ...	...	1,620	...	0 8	„	810 0 0	810 0 0	.....	.....	.....	.....	810 0 0	.....
		Total	...	4,130	...	.....	...	2,075 0 0	2,075 0 0	.....	.....	.....	.....	2,075 0 0	.....
WESTERN.	Public Works Department...	Teak ...	...	8	434½	40 0	Ton	347 11 0	347 11 0	.....	108 0 0	8 11 0	116 11 0	231 0 0	.....
	Ditto ditto ...	Do. ...	...	28	910	30 0	„	546 0 0	.....	546 0 0	273 0 0	45 8 0	318 8 0	227 8 0	.....
	Bassein Jail	do. ...	...	44	2,197½	30 0	„	1,318 7 2	1,318 7 2	.....	464 0 0	109 14 0	573 14 0	744 9 2	.....
		Pyingado ...		11	...	7 0	Each	77 0 0	77 0 0	.....	88 0 0	.....	88 0 0	.....	11 0 0
		Kashit ...	...	40	1,013	13 8	Ton	273 9 6	273 9 6	.....	205 0 0	40 8 3	245 8 3	28 1 3	.....
		Total	...	131	4,555	.....	...	2,563 11 8	2,016 11 8	546 0 0	1,138 0 0	204 9 3	1,342 9 3	1,231 2 5	11 0 0
RANGOON.	Executive Engineer, Rangoon division ...	Pyingado ...	...	61	832	4 8	Ton	75 1 0	75 1 0	.....	.....	33 4 5	33 4 5	41 12 7	.....
		In-gyin ...	...	14	190	.....	„	17 2 0	17 2 0	.....	.....	7 9 7	7 9 7	9 8 5	.....
		Total	...	75	1,022	.....	...	92 3 0	92 3 0	.....	.....	40 14 0	40 14 0	51 5 0	.....
	Total, Pegu ...	.....		.....		.....	...	7,512 13 8	6,966 13 8	546 0 0	1,862 7 0	732 10 2	2,595 1 2	4,928 12 6	11 0 0
	GRAND TOTAL ...	.....		.....		.....	...	74,349 9 11	65,021 10 11	9,327 15 0	35,965 15 9	2,805 14 6	38,771 14 3	35,588 11 8	11 0 0
													Deduct deficit ...	11 0 0	.....
													Balance ...	35,577 11 8	.....

FORM No. 60.—*Abstract showing the value of timber and of live and dead stock for the year 1879-80.*

Description of timber and other stock.	On hand at commencement of year.		Received during the year.		Total.		Sold or otherwise disposed of and lost during the year and allowance for depreciation.		On hand at close of the year.		Cause of loss and other particulars.
	No.	Value.	No.	Value.			No.	Value.			
		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.	
Timber stock	17,504	1,72,107 15 1	23,440	2,81,892 8 0	40,944	4,54,000 7 1	25,977	3,44,626 3 8	14,967	1,09,374 3 5	
Live do.	3	4,400 0 0	...	.....	3	4,400 0 0	1	1,800 0 0	2	2,600 0 0	
Value of buildings, rest-houses, &c.	17	12,468 13 0	...	.....	17	12,468 13 0	...	.....	17	12,468 13 0	
Dead stock	...	5,249 15 0	...	1,442 4 0	...	6,692 3 0	...	1,683 8 4	...	5,008 10 8	
Kado duty	...	76,473 4 0	...	2,14,672 0 0	...	2,91,145 4 0	...	2,15,968 8 0	...	75,176 13 0	
Total, Tenasserim Circle ...	...	2,70,699 15 1	...	4,98,006 12 0	...	7,68,706 11 1	...	5,64,078 4 0	...	2,04,628 7 1	
Timber stock	21,962	4,18,967 0 0	22,017	5,05,988 0 0	43,979	9,24,955 0 0	28,205	5,39,395 0 0	15,774	3,85,560 0 0	
Live do.	42	53,200 0 0	12	16,255 0 0	54	69,455 0 0	18	13,455 0 0	36	56,000 0 0	
Value of buildings and officers' Quarters and rest-houses	35	37,736 0 0	4	20,886 0 0	39	58,622 0 0	...	5,042 0 0	39	53,580 0 0	
Dead stock	...	16,523 0 0	...	2,274 0 0	...	18,797 0 0	...	1,678 0 0	...	17,119 0 0	
Total, Pegu Circle ...	...	5,26,426 0 0	...	5,45,403 0 0	...	10,71,329 0 0	...	5,59,570 0 0	...	5,12,259 0 0	
GRAND TOTAL ...	...	7,97,125 15 1	...	10,43,409 12 0	...	18,40,036 11 1	...	11,23,648 4 0	...	7,16,887 7 1	

APPENDIX A.

Statement of teak trees girdled and forest work done in season 1879-80.

Name and number of section.	Name of Revising Officer.	Forest.	Sub-district.	Trees girdled.	First class trees estimated.	Trees counted by Revising Officer.		Percentage of girdled trees.	Percentage of 1st class trees girdled.	Creepers cut.	Young teak.	Other trees girdled.	Other kinds of trees felled.
						Trees girdled.	First class trees.						
TENASSERIM CIRCLE. SALWEEN DISTRICT.	Mr. T. H. Aplin	Upper Salween Mehthalouk	Vicinity of Da-gwin-zake high road	34	...	...	...	...	...	...	...	...	...
			Sources of the Tookay choung	66	...	...	...	...	...	...	...	...	...
			Between the Kehlaw and Oodoo streams	107	...	...	...	...	...	...	...	...	...
			Between the Oodoo and Pawlaw streams	27	...	...	...	...	...	...	...	...	...
			In vicinity of Methalouk choung	55	...	...	...	...	...	...	...	...	...
	Moung See, Forester	Lower Thoung-gin	Below Weewee streams	316	...	...	...	...	...	...	...	5	6
			Total Tenaeserim circle	605	...	...	...	...	...	...	...	5	6
RANGOON DIVISION	Mr. P. J. Carter	Pegu	*Sehdaw—*										
			Lehtareh, Lamanla, Tikewa, and Kado choung	530	...	530	...	...	...	...	...	...	...
			Pyoo choung	321	...	321	...	...	...	...	...	...	...
			Saygan do.	183	...	183	...	...	...	...	...	...	...
			Sinzweh—										
			Sin-gyat choung	368	...	368	...	...	...	...	...	...	...
			Heingsweh choung near source	598	...	598	...	...	...	...	...	...	...
			Total, Rangoon division	2,000	...	2,000	...	...	...	...	...	...	...
PROME DIVISION	.....	Bootleh	*Shway-loung K. west bank—*										
			Singoke myoung	77	...	77	...	...	...	...	...	...	...
			Between Singoke myoung and Natoo myoung	391	...	391	...	...	...	...	...	...	...
			Shway-loung K. east bank—										
			Between Hlehdan myoung and reserve	252	...	252	...	...	...	...	...	...	...
			Binhone K. east bank	280	...	280	...	...	...	...	...	...	...
MADEH RANGE	Moung Kyin Doon, Forest Ranger	Bootleh	*Choung-goung-gyee K.—*										
			East bank of Main choung above mouth of Yaylone choung	60	...	60	...	...	...	...	...	...	...
			Yayloune East—										
			Kwaymee myoung	165	...	165	...	...	...	...	...	...	...
			Yayloune West—										
			Between Nga-douk myoung and Yayloune choung	68	...	68	...	...	...	...	...	...	...
			Between Nga-douk myoung and Myoungtha	109	...	109	...	...	...	...	...	...	...
			Total, Bootleh forest	1,402	...	1,402	...	...	...	...	...	...	...

APPENDIX A

Statement of teak trees girdled and forest work done, &c.—(continued).

Name and number of section.	Name of Revising Officer.	Forest.	Sub-district.	Trees girdled.	First class trees girdled.	Trees counted by Revising Officer.		Percentage of girdled trees.	Percentage of 1st class trees girdled.	Creepers cut.	Young teak cleared.	Other trees girdled.	Other kinds of trees felled.
						Trees girdled.	First class trees.						
			Pa-deh choung north bank.										
Madeh Range	Moung Kyin Doon, Forest Ranger	Bootleh	Between Kadin Thone-zin K. and Lake-take K.	67	...	67	...	...	...	...	...	...	...
			Do. Lake-take K. and Koke choung	11	...	11	...	...	...	...	...	...	...
			Near Myoung Bin-gyin village	32	...	32	...	...	...	...	...	...	...
			Between Neebadoung and Koke choung	47	...	47	...	...	...	...	...	...	...
			Do. do. and To-boke choung	13	...	13	...	...	...	...	...	...	...
Myay-deh Range	Ditto	Pa-deh	Do. do. and Aleh choung	44	...	44	...	...	...	...	...	...	...
			Do. Aleh choung and Pa-deh	74	..	74	...	...	...	...	...	...	...
			Pa-deh choung souk bank.										
			East bank Kwin-gyee choung, lowest point	48	..	48	...	...	...	...	...	...	...
			North bank Yayboke myoung, feeder of Kwin-gyee choung	12	...	12	...	..	...	...	...	...	...
			Between Kwin-gyee and Hlehdoung choung	94	...	94	...	...	...	...	...	...	...
			Do. Koon myoung and Pin-hyee-in	87	...	87	...	...	...	...	...	...	...
			Do. Natgauin and Bwet myoung East watershed	71	...	71	...	...	..	...	...	...	...
			Total, Pa-deh Forest	600	...	600	...	...	...	...	...	...	...
			Grand Total, Myaydeh Range	2,002	..	2,002	...	...	...	...	...	...	...
			North Nawin choung.										
			Nga Toolsaw choung west bank near source	15	...	15	...	...	...	...	...	...	...
			Do. do. east do.	13	...	13	...	...	..	...	...	...	...
			Nga Mwayzin choung north bank	96	...	96	...	...	...	...	...	...	...
			Swehla-doo village	65	...	65	...	...	...	...	...	...	...
			Soon K.										
Nawin Range	Mr. P. E. Huddleston	North Nawin	Pattaya choung west bank	142	...	142	...	...	...	...	...	...	...
			Koke do. east do.	32	...	32	...	...	...	...	...	...	...
			Do. do. west do.	26	...	26	...	...	...	...	...	...	...
			Thayet do. do. do.	81	...	81	...	...	...	...	...	...	...
			Kyan Thay do. north do.	28	...	28	...	...	...	...	...	...	...
			Do. do. south do.	24	..	24	...	...	...	...	...	...	...
			Do. do. village on Kyan	43	..	43	...	...	...	...	...	...	...
			Nga Gway village	66	...	66	...	...	...	...	...	...	...
			Total, North Nawin Forest	631	..	631	...	...	...	...	...	...	...

NAWIN RANGE ...	Mr. F. E. Huddleston	Middle Nawin ...	Mehsakee choung west bank	18	...	18	...	...	...	...	...	...	...
			Thayet do. do. do.	94	...	94	...	...	...	...	...	...	...
			Do. do east do.	55	...	55	...	...	...	...	...	...	...
			Bangwah do. west do.	64	...	57	...	...	...	...	...	...	...
			Do. do. east do.	21	...	21	...	...	...	...	...	...	...
			Shway-loung do. west do.	13	...	13	...	...	...	...	...	...	...
			Do. do. east do.	6	...	6	...	...	...	...	...	...	...
			Between Hlan Okedo choung and Woongalay choung on Kyaso	138	...	138	...	...	...	...	...	...	...
			Woongalay choung north east bank	55	...	43	...	...	...	...	...	...	...
			Total, Middle Nawin Forest ...	464	...	440	...	...		...	...	...	...
			Total, Nawin Range ...	1,095	...	1,071	...	...	...	...	...	...	...
			„ Myaydeh „ ...	2,002	...	2,002	...	...	...	...	...	...	...
			GRAND TOTAL OF TREES GIRDLED OUTSIDE RESERVE ...	3,097	...	3,073		...	...	...	...	...	...
.....	.....	Wa-pyoo reserve ..	West bank of Wa-pyoo stream	177	...	177	...	...	...	...	...	...	...
.....	.....	Do.	East do. do. do.	80	...	80	...	...	...	...	...	...	...
			Total Wa-pyoo Reserve ...	257	...	257	...	...	...	...	...	...	...
.....	.....	Meedo reserve ...	West bank Meedo stream...	178	...	178	...	...	...	...	...	...	...
.....	.....	Do.	East do. do. do.	495	...	495	...	...	...	...	...	...	...
			Total, Meedo stream ...	673	...	673	...	...	...	...	...	...	...
			GRAND TOTAL OF TREES GIRDLED INSIDE RESERVE ...	930	...	930	...	...	...	...	...	...	...
			Total of all trees ...	4,027	...	4,003	...	...	...	...	...	...	...
	Mr. E. P. Popert	Moke-ka	Tabin-that south bank	202	...	202	394	100	About 50 per cent.	561	...	...	...
	„ J. Lang	Ga-mone	South of Minlan between Ga-mone and Kanunjoke streams	664	...	664	778	100	About 85 per cent.	...	...	...	...
	Do.	Do.	Ditto ditto ditto	1,395	...	...	...	...	...	...	...	...	...
			Total, Ga-mone ...	2,059	...	664	778	100	...	...	...	...	...
THARRA-WADDY ...	.....		Lower	259	...	...	...	...	...	...	...	...	...
			Momanyo	108	...	...	...	...	...	...	...	...	...
			Lambin-ngoo	721	...	...	...	...	...	...	...	...	...
			Thambayabinzake	7	...	...	...	...	...	...	...	...	...
			Upper Mayin	142	...	...	...	...	...	...	...	...	...
			Pyinbone	476	...	...	...	...	...	...	...	...	...
			Oketan	26	...	...	...	...	...	...	...	...	...
		Toun g-oo ...	Tantabin	3,012	...	...	...	...	...	...	...	...	...
			Kanyinsan	76	...	...	...	...	...	...	...	...	...
			Byboobin-gway	427	...	...	...	...	...	...	...	...	...
			Sehgan	30	...	...	...	...	...	...	...	...	...
			Kyet-lay-thet	34	...	...	...	...	...	...	...	...	...
			Kyoon-gouk-gone	136	...	...	...	...	...	...	...	...	...
			Myoung-waing	203	...	...	...	...	...	...	...	...	...
			Gway-choung-bin	137	...	...	...	...	...	...	...	...	...
			Total, Toungoo ...	5,798	...	...	...	...	...	...	...	...	...
			GRAND TOTAL, THARRAWADDY DIVISION	8,055	...	666	1,172	...	...	561	...	...	...

APPENDIX A.

Statement of teak trees girdled and forest work done, &c.—(concluded).

Name and number of section.	Name of Revising Officer.	Forest.	Sub-district.	Trees girdled.	First class trees estimated.	Trees counted by Revising Officer.		Percentage of girdled trees.	Percentage of 1st class trees girdled.	Creepers cut.	Young teak cleared.	Other trees girdled.	Other kinds of trees felled
						Trees girdled.	First class trees.						
Toungoo Division ...	Mr. J. Nisbet	Kyoukmasin ...	Woon choung	162	...	162	...	...	...	...	...	...	...
			Prot do. north	464	...	299	...	...	...	...	...	...	...
			do. do. south	299	...	39	...	...	...	...	...	...	...
			Seletto south-west	39	...	162	...	...	...	...	...	...	...
			do. north	162	...	112	...	...	...	...	...	...	...
			Yee east	112	...	52	...	...	...	...	...	...	...
			do. west	52	...	135	...	...	...	...	...	...	...
			Pyingyee Soma	135	...	117	...	...	...	...	...	...	...
			Seletto south	117	...	52	...	...	...	...	...	...	...
			Kyoukmasin east	52	...	277	...	...	...	...	...	...	...
			Seletto Kyetha	277	...	36	...	...	...	...	...	...	...
			Magoo north-east	36	...	114	...	...	...	...	...	...	...
			do. south-east	114	...	336	...	...	...	...	...	...	...
			Bwot	336	...	199	...	...	...	...	...	...	...
			Dorlen north-east	199	...	22	...	...	...	...	...	...	...
			do north and south-east	22	...	166	...	...	...	...	...	...	...
			do south-east	166	...	233	...	...	...	...	...	...	...
			Taw-myin north-west	233	...	91	...	...	...	...	...	...	...
			Dorlen Kyitsh No. 1	91	...	277	...	...	...	...	...	...	...
			do. do. „ 2	277	...								
			Total, Kyoukmasin ...	3,345	...	3,345	...	...	...	6,619	...	552	...
.....	Moung Shway Gone	Pabeh ...	Pabeh stream	137	...	137	...	...	...	...	...	...	...
.....	„ Yine, Ranger, revised by Mr. J. Nisbet ...	Thaing ...	Lower Thaing choung	1,014	...	1,014	...	..	...	...	...	...	...
			Total, Toungoo Division ...	4,496	...	4,496	...	...	...	6,619	...	552	...
			Total, Pegu Circle ...	18,578	...	11,365	...	...	...	7,200	...	552	...
			Total, Tenasserim Circle ...	605	...	605	...	...	...	...	...	5	6
			Grand Total British Burma ...	19,183	...	11,970	...	...	...	7,200	...	557	6

APPENDIX B.

Statement exhibiting cost of food and keep of elephants of the Forest Department, British Burma, for the official year 1879-80, as compared with that of the Commissariat Department for the same period.

Name of divison.	Number of elephants at commencement of year.	Casualties during year.	Number of elephants at close of year.	Cost of feed.	Cost of keep including gear.	Cost of Medicines.	Total expenditure for the year.	Average monthly cost per animal of the Forest Department.	Average monthly cost per animal of the commissariat department.	Amount paid by Officers for carriage elephants.	Value of labour in cash receipts and work performed.	Remarks.
				Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Salween	3	1	2	510 3 3	1,237 15 0	119 10 0	1,867 12 3	64 13 7	41 1 4	....	2,295 12 0	One elephant died on the 27th October 1879.
Tharrawaddy	6	...	6	420 7 0	1,801 2 7	35 14 0	2,257 7 7				2,168 0 0	In the Pegu Circle, 19 animals were purchased during the year making a total of 45. The number of casualties was 9 thus leaving on 31st March 1880, 36 elephants.
Rangoon	3	...	3	314 9 3	545 7 9	17 12 0	877 13 0				1,588 0 0	
Prome	2	...	3	183 5 0	809 13 6	39 11 0	1,032 13 6				1,180 0 0	
Toungoo	6	4	6	82 13 0	1,535 8 8	38 3 0	1,656 8 8	42 8 6	43 1 3	.....	2,484 0 0	
Agency	12	5	14	5,262 5 0	5,655 6 3	338 6 6	11,256 1 9				8,184 0 0	
Western	2	..	2	158 7 0	562 3 9	30 13 0	751 7 9				1,025 8 0	
Shway-gyin	2	...	2	75 5 0	521 3 7	53 6 0	659 14 7				656 0 0	
Total, Pegu Circle .	33	9	36	6,497 3 3	11,430 14 1	554 1 6	18,482 2 10	.....	.....	42 12 6	17,285 8 0	
GRAND TOTAL ..	36	10	38	7,007 6 6	12,668 3 1	673 11 6	20,349 15 1	.....	...	42 12 6	19,580 4 0	

APPENDIX C.

List of buildings of which the cost exceeds Rs. 200, and for the occupation of which no rent is paid.

Division.	Number.	Name of buildings.	Station.	Remarks.
		TENASSERIM CIRCLE.		
KADO	1	Guard-house	Martaban.	
	2	Ditto	Moulmein.	
	3	Offices and two out-houses	Kado.	
	1	Lascars' house	Do.	
	1	Upper guard-house	Do.	
	1	Lower ditto	Do.	
	1	Guard-house	Nanteh.	
SALWEEN	1	Bungalow	Kaukarake.	
	1	Ditto	Pa-poon.	
	1	Rest-house	Kyain.	
	1	Elephant-shed	Moulmein.	
	1	Paddy-shed	Ditto.	
SOUTH TENASSERIM	1	Office	Mergui.	
	1	Guard-house	Tavoy.	
		PEGU CIRCLE.		
RANGOON	1	Road bungalow	Magayee.	
	1	Plantation bungalow	Ditto.	
	1	Ditto	Kyet-pyoo-gan.	
	5	Revenue stations	Kaya-zoo, Zoung-doo, Taw-la-teh, Awaing and Hlehgoo.	
	1	Forest Office	Pegu.	
DEPÔT AND AGENCY	1	Central depôt office	Kemendine, Rangoon.	
	1	Overseers' quarters		
	6	Guard-houses		
	1	Mahouts' house		
	1	Elephant-shed		
	1	Seasoning do.		
PROME	1	Forest office	Prome.	
	2	Rest-houses	Kadin-nga-sin and Toungalay.	
THARRAWADDY	1	Forest office	Poung-deh.	
	1	Do. do.	Tharrawaddy.	In course of construction.
	1	First class bungalow	Ditto.	In course of construction.
	9	Rest-houses	(1) Kangee, (2) Euxine, (3) Gyo-bin-aing, (4) Saingalay, (5) Bawbin, (6) Waing, (7) Sanyuay, (8) Kway-ma-kaing, (9) Koung-loung-daing.	In course of construction.
TOUNGOO	1	Forest office	Toungoo.	
	3	Rest-houses	Pyoon-choung. Zeebyoobin and Tabetkweh.	
SHWAI-GYIN	1	Forest office	Shway-gyin.	

PROGRESS REPORT

ON

FOREST ADMINISTRATION

IN

BRITISH BURMA

FOR

1880-81,

By Major W. J. SEATON, M.S.C., and B. RIBBENTROP, Esq.,
CONSERVATORS OF FORESTS,

WITH A REVIEW BY THE CHIEF COMMISSIONER AND THE ORDERS OF THE GOVERNMENT OF INDIA.

RANGOON:
PRINTED AT THE GOVERNMENT PRESS.
1881.

No. 81F., dated Fort William, the 20th January 1882.

From—A. MACKENZIE, Esq., Offg. Secretary to the Government of India, Home Department.

To—The Chief Commissioner of British Burma.

I AM directed to acknowledge the receipt of Mr. Kynoch's letter No. 6030—35 II, dated the 31st August last, forwarding the Annual Report of Forest Administration in British Burma for 1880-81, together with your review thereof.

Forest Reserves.

2. The progress made in constituting forest reserves is shewn in the following table :—

	Square miles.
Area reserved on the 1st April 1880	1,441
Added during the year 1880-81	599
Total area on the 1st March 1881 ...	2,040
Add area reported on by Forest Settlement Officers, but not yet gazetted	1,091
GRAND TOTAL ...	3,131

In addition, considerable areas have been examined by the forest staff in a preliminary manner. The area inside the reserves set aside for the toungya cultivation of the Karens has been increased from 170 to 248 square miles. The demarcation of the boundaries of all the gazetted reserves is almost complete.

The total area has now very nearly come up to the maximum of 3,474 square miles taken by Mr. Brandis in paragraph 175 of his 'Suggestions regarding Forest administration in British Burma (1881)' as the area that should be demarcated as reserves in the Pegu and Tenasserim Civil Divisions. It is hoped that the highly satisfactory progress made during the year will be maintained until the work of demarcation throughout the Province has been completed.

3. The Governor General in Council is glad to observe that the requirements of the people in the vicinity of the reserves continue to receive your attention, and that every precaution is being taken to avoid unnecessary inconvenience to the public. Where, as in Burma, so much land is still at the disposal of Government, it will always, it may be hoped, be found possible to do full justice both to the requirements of the people and to Forest conservancy.

Protection from Fire.

* No. 733 F., dated the 9th November 1880.

4. In the* orders of the Government of India on the Report for 1879-80, it was said that the progress of fire protection in British Burma had hitherto been slow, but that more rapid progress need not be insisted on, provided the advance was steady, and the outlay moderate. The results during the year under review have not been satisfactory, 19,360 acres having been burnt out of an area of 96,218 acres which it was attempted to protect. The areas under fire-protection, with the results of operations during the last five years, were thus :—

YEAR.	AREA IN ACRES. Attempted.	AREA IN ACRES. Failures.	Outlay.
			Rs.
1876-77	88,096	17,304	16,674
1877-78	84,215	16,017	8,100
1878-79	74,867	3,545	9,816
1879-80	98,637	2,224	8,837
1880-81	96,218	19,360	10,577

From these figures it has been calculated that the average cost per acre successfully protected amounts to two and-a-quarter annas

per annum, which is no doubt a moderate charge. At the same time the average annual failures are as high as 13 per cent. of the area attempted, and at this rate an area equal to that attempted will be burnt over once every eight years. Under such conditions fire-protection cannot do much good, as the majority of the young trees raised in the intervals will, as a rule, be burnt periodically, although the older trees may to some extent profit by the partial protection given. It is also noticed that changes have taken place annually in the area attempted.

5. The Governor General in Council desires that steps may be taken to put fire-protection on a more satisfactory footing. With this object in view, the areas to be taken in hand, in the first instance, should be selected once for all, and no change should be made until complete success has been obtained in them. As already pointed out in paragraph 5 of your orders on the Report, the people living in the vicinity of the protected areas should be given a direct interest in the safety of the areas, while the provisions of section 26 of Act XIX of 1881, if carefully worked, will secure the due punishment of all persons who negligently or maliciously set fire to the reserves.

Reproductive Measures.

6. While the time of Forest Officers in Burma is as at present so fully occupied with the examination, selection and demarcation of reserves, not much progress can be expected in reproductive measures. It is satisfactory to notice that nevertheless a considerable area has been planted with teak during the year, as will be seen from the subjoined data :—

	Area planted, in acres.			Outlay, in Rupees.	
	At the beginning of the year.	Added during the year.	Total.	Total from the commencement.	Per acre.
Regular plantations ...	3,389	155	3,544	3,14,274	89
Toungya do. ...	2,515	1,072	3,587	31,202	9
Total ...	5,904	1,227	7,131	3,45,476	48

In paragraph 218 of Mr. Brandis' 'Suggestions' quoted above, it was proposed that 200 acres of regular plantations and upwards of 1,000 acres of toungya teak plantations should be made annually in reserves protected from fire, and it was estimated that the cost of the former would in future amount to Rs. 40, and that of the latter to Rs. 14 per acre. The contemplated area has been fairly worked up to, although parts of the area are not yet sufficiently well stocked. From the data recorded in the Report it appears that the cost of the operations is likely to exceed the estimate mentioned above, as successful toungya plantations are not likely to cost less than Rs. 20 per acre by the end of the fourth year, while the planting operations at Magayee have cost considerably more than Rs. 40 per acre. As regards the protection from fire, much has yet to be done. During the year various areas planted in former years have been burnt over, and the first care of the officers of the department, as regards reproductive measures, must be to prevent a recurrence of such disasters.

Cultivation of Exotic Trees.

7. The remarks on the experimental cultivation of exotic trees have been read with interest; it is hoped that the experiments with Mahogany will be continued with the view to the permanent introduction of this most valuable tree.

Girdling Operations.

8. The total number of teak trees girdled during the year amounts to 22,846, of which, however, 4,874 trees were girdled in April 1880, thus leaving a balance of 17,972 trees girdled during

the working season of 1880-81. This number is somewhat in excess of that given in paragraph 230 of Mr. Brandis' 'Suggestions.'

The girdlings of other trees comprised 252 padouk and 1,516 pyinma. The Governor General in Council fully approves of the endeavour to substitute other timber for teak whenever this is practicable, and with this view the girdling of trees other than teak may be extended, provided the proceeds realized by the sale of the timber cover the outlay incurred.

Outturn of Timber Operations.

9. The timber returns appended to the report are extremely difficult to understand; as, however, new forms have been prescribed in the second edition of the Departmental Code, it is confidently expected that those appended to next year's Report will convey a readily intelligible idea of the operations of the year.

The total outturn of teak from the forests in British Burma is given as 22,253 tons, which is equivalent to an increase of 4,668 tons as compared with the outturn of the preceding year. At the same time the yield is only about half what it was five years ago. The falling off is due to the temporary suspension of girdling operations, but as the latter have now been resumed, it may be expected that the yield will soon rise to about 35,000 tons per annum, the estimate recorded in paragraph 230 of Mr. Brandis' 'Suggestions.'

10. The outturn of timber other than teak under the trade and free permit system compares as follows with the corresponding figures for previous years:—

	Trade permits.	Free permits.	Total.
	Logs and trees.	Logs and trees.	Logs and trees.
1877-78	50,099	71,714	121,813
1878-79	13,862	47,913	61,775
1879-80	35,038	91,677	126,715
1880-81	17,661	77,924	95,585
Average ...	29,165	72,307	101,472

The fluctuations indicated by these data are partly explained by the doubt which exists regarding the correctness of the figures of previous years. It is hoped that it will be practicable to make the returns more accurate and trustworthy every year.

The number of cutch trees felled and consumed during the year in Pegu amounts to 436,500, which is a very large yield, and, as pointed out by you, existing cutch trees cannot last long at the present rate of consumption. The Governor General in Council is, therefore, glad to learn that measures are being taken for the protection and reproduction of this important tree.

Import and Export of Timber.

11. As far as the data given admit of a comparison, it appears that the imports of timber indicate a falling off, as compared with those of the previous year. On the other hand the quality of the timber is said to have been better than in the year 1879-80.

The exports of teak timber amounted to 151,274 tons, which is considerably more than the corresponding quantities for several years past. On the whole, it appears that imports and exports are regulated by the timber prices at Moulmein and Rangoon, and that the fluctuations of the quantities imported do not justify us in judging of the quantity of timber yet available beyond the frontier. As the duty on foreign timber imported by the Salween River has now been reduced from 7 per cent. *ad valorem* to 1 per cent., and as the prices ruling at present are high, a considerable increase in the imports may be expected during the next few years.

12. The financial results of the year have been favourable, as will be seen from the subjoined data :—

Year.	Receipts.	Charges.	Surplus
	Rs	Rs	Rs
1876-77	15,51,468	10,05,044	5,46,424
1877-78	16,03,023	8,55,816	7,47,207
1878-79	11,37,562	7,18,401	4,19,161
1879-80	11,80,190	7,53,490	4,26,700
1880-81	15,16,613	7,12,568	8,04,045
Average	13,97,771	8,09,064	5,88,707

Of the average annual revenue realized during the last five years, Rs. 2,56,668 are due to collections of duty on foreign timber, which, as already noticed above, will in future bring in only about one-seventh of that amount. If the difference is deducted from the receipts the average financial results during the last five years stand thus :—

	Rs.
Receipts	11,77,770
Charges	8,09,064
Surplus	3,68,706

Considering that the reduction of the duty on foreign timber on the Salween will result not only in a direct loss of revenue, but is also likely to cause an increased import by that river and a corresponding depreciation of British timber, it is evident that, in addition to the development of all legitimate sources of revenue, strict economy and a close scrutiny of all items of expenditure must be exercised in order to maintain a proportionate surplus in future years.

Forest Staff.

13. The health of the superior staff has not been good during the year, and it is satisfactory to notice that you are, nevertheless, satisfied with the work of the officers. On the other hand it is reported that the subordinate staff has not done well, and that it contains comparatively few good men. Under these circumstances it is hoped that the Dehra Dún Forest School may be extensively utilized for the training of Rangers, who, on their return to Burma, may be of use in raising the efficiency of the subordinate staff.

14. On the whole, good work has been done during the year, and the Governor General in Council desires to thank you for the interest you take in the work of the Department, as well as for the exhaustive review of the years' operations attached to the Report.

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REPORT

ON

THE FOREST ADMINISTRATION

OF

BRITISH BURMA

FOR

The year 1880-81.

RANGOON:

PRINTED AT THE GOVERNMENT PRESS.

1881.

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RESOLUTION

ON THE

FOREST ADMINISTRATION

OF

BRITISH BURMA

FOR THE YEAR 1880-81.

Extract from the Proceedings of the Chief Commissioner, British Burma, in the Forest Department,—No. 35H., dated the 29th August 1881.

READ—

Reports of Conservators on the administration of forests in the Tenasserim and Pegu circles for the year 1880-81.

RESOLUTION.—During the year 1880-81 was issued Mr. Brandis's report entitled "Suggestions regarding forest administration in British Burma." The issue of this report was one of the most important events in the forest work of the year, and deserves special notice in this place. Mr. Brandis's remarks and suggestions will form the basis for forest work in Burma for many years to come. They explain the course and the object of forest operations in this province, and form a storehouse of information which will be of the utmost value to all who are concerned with the administration of the Burma forests or with the trade in Burma forest produce.

For the last two years a single report on the whole forest administration of the province has been required from the Senior Conservator of Forests. For the year 1880-81 the Conservators have been allowed to prepare separate reports for their respective circles, a plan which, it is believed, they find more convenient. The reports were received at the time they were due. The prescribed statements were prepared in a combined form for the whole province in the Conservator of Pegu's office within a few days of the receipt of the reports. The proof of the reports was revised by Mr. Ribbentrop.

2. The remarks made in last year's resolution concerning the manner in which the various heads of forest work are reported on division by division are applicable to the present report. The result of the system adopted is not satisfactory. It is difficult to follow the scattered descriptions and to obtain a good general idea of the working of the Forest Department. Perhaps Conservators will be able in their next reports to present the facts which they wish to record in a more readily intelligible and comprehensive shape.

3. There are three main objects to which the Forest Department have to devote their attention,—the protection of existing forests; the improvement of forest growth; and the securing of revenue from forests. Their operations for these purposes may be divided into the following heads:—

I.—Forest reservation, that is, the placing of certain selected areas of forest land subject to special conditions under the direct management of the Forest staff.

II.—The protection of these forest reserves—
(1) from fire;
(2) in other ways.

III.—Reproduction and improvement of forest growth—
(1) of teak—
(*a*) by means of regular plantations managed by the Forest staff;
(*b*) by means of planting in toungyas through the agency of Karen and other cultivators.
(2) of other kinds of trees;
(3) the introduction of new descriptions of trees and plants.

IV.—The protection and working of forests not included in reserves.

V.—The raising of revenue from forests reserved and unreserved.

I.—Forest Reservation.

4. Excluding the area allotted to Karens, which was previously 170 and now amounts to 248·5 square miles, the extent of forest reserves has risen from 1,441 square miles in 1879-80 to 2,010 square miles in 1880-81. The increase made to the area of reserved forest during the year under review has thus been 599 square miles, as against 202 square miles in the previous year. This result is obtained after excluding 15 square miles thrown out of reservation. The reserves sanctioned during the year 1880-81 were as follows:—

	Square miles.	
Tenasserim circle—		
Kamawkala	9	
Mehpaleh East	60	
Mehkaneh	30	
Kyoukket	19	
Mehgala	10	
		128
Pegu circle—		
Hlaing Yoma	93	
Okekan	125	
Kaboung	345	
Kyoondoung	1·5	
		564·5
		692·5
Deduct on account of Karen areas 78·5 square miles and the area of the Bangone and Thabyayhla reserves, abandoned with the sanction of the Government of India, 15 square miles		93 5
		599·0

Of these reserves, Okekan and Hlaing Yoma were noticed in last year's Forest Review. The Kaboung reserve, in the Toungoo district, is a very large and important forest tract. The enquiry previous to demarcation was made in a thorough and complete manner by the Forest demarcation staff, and due consideration was shown to the Karens and others living in its neighbourhood. During the year the work of selecting and demarcating suitable forest areas for reservation was actively carried on throughout the province. In Tenasserim circle two Civil Officers were employed on demarcation duty; in East Salween

division an officer was specially deputed for the purpose; in West Salween the work was performed by the District Officer. No less than seven proposed reserves were visited and reported on by the former officer. In the Pegu circle various Civil Officers were deputed to demarcation duty in the Prome, Thayetmyo, Hanthawaddy, and Toungoo districts, and examined ten proposed reserves. The enquiries were carefully conducted in general accordance with rules modelled on the provisions of the Forest Bill prepared for Burma, and it is believed that the work of demarcation has been satisfactorily done. In some instances, in consequence of applications from villagers in the neighbourhood of forests already reserved, fresh enquiries were instituted. The results were favourable to the manner in which the reservations had been effected. All the reserves examined by the demarcation staff this season have been sanctioned, and are in course of being notified, except one. In the case of the Pachoung reserve the papers had to be remitted to the Demarcation Officer for further enquiry because he had not held enquiry on the spot. Details concerning the area and character of these new reserves will be given in the reports of next year. During the year the selection of areas for future reservation was carried out on a considerable scale by officers of the Forest Department. Demarcation may therefore be said to have made fair progress; and we may now begin to make surveys and working plans of the older reserves, taking in hand first the forests of the Tharrawaddy division.

The reservation of these large tracts from the toungya-cutter's (hill-gardener's) axe has certainly disconcerted the Karens and forest folk in more than one district. The attitude of discontent with respect to the action of the Forest Department, which is attributed to the Karens in the Thoungyin, is perhaps due to excessive caution in the protection of forests. In the Upper Beelin forests, in West Salween, and in parts of the Attaran, forest conservancy is said to be unpopular because of the restrictions imposed on buffalo-owners, whose established custom had been to turn large herds of buffaloes loose in the forests during the dry season. It is worthy of consideration whether these restrictions might not safely be relaxed without injury to the forests and to the advantage and content of the people, and the Commissioner and Conservator should together investigate and report on this matter. It is very expedient to make forest conservancy as little irksome as possible, and to enlist the goodwill of the people on the side of forest preservation.

No reserves have yet been proposed in the Arakan division, in the Arakan Yoma hills above Bassein, Henzada, and Prome, or in the Mergui district, or in the mangrove and tidal forests of the Irrawaddy delta.

II.—The Protection of Forest Reserves.

1. Protection from fire.

5. The Forest Department attempted to protect from fire an area of 96,218 acres, or slightly less than in the previous year, when the area was 98,637 acres. The extent of forest with respect to which their endeavours failed is returned at 2,224 acres for 1879-80; in 1880-81 no less than 19,360 acres suffered from fire. On the other hand, the expenditure on fire-protection rose from Rs. 8,837 to Rs. 10,577. In the Tenasserim circle there are apparently ten reserves in which protection from fire was attempted. The efforts of the Forest Officers were unavailing in as many as

six of these reserves. In the Pegu circle the protection from fire of 18 reserves and plantations was attempted. Fire occurred in ten of these. In some cases the fire was very trifling, but in several instances there were serious conflagrations. It is however satisfactory to find from later reports, submitted after an examination of the principal reserves which suffered, that the damage done is not serious. In the Mokeka-Beelin reserve none of the trees appear to be killed. In the Bwet reserve the actual damage has not been found to be so great as was at one time feared, although a good many of the teak plants have perished. Detailed reports concerning the results of the fires in the forests of the Pegu circle are printed as appendices to Mr. Ribbentrop's report. Fire occurred twice in four of the reserves and plantations, thrice in two, and four times in one of them. The general cause assigned for these results is the early and prolonged drought. Special explanation is also given in particular cases, from which it would appear that the fault sometimes lay with the persons in charge.

The business of protecting reserves from fire forms a very difficult problem in Burma. This year we have spent 10,000 rupees in attempting to protect from fire 98,000 acres out of a total of 1,300,000 acres of reserved forest. Yet fires occurred once, or more than once, in 16 reserves out of 28 to which our efforts were directed. The reserves will probably aggregate 2,500,000 acres before the demarcation work now in contemplation is finished. At the present rate of charge the fire-protection of this great area would cost over 2½ lakhs of rupees. Even then we could not hope to keep out fire in years of rainless spring and summer months, or from forests where bamboos had flowered over large areas. It is comforting to find that teak of good growth seems to escape almost unscathed from ordinary fires, and that even teak plantations, on toungyas or elsewhere, have suffered much less from fire passing over them than would have been expected. Though this is so, nevertheless the work of protecting from fire a yearly increasing area of reserves and plantations must be maintained as one of the primary objects of forest conservancy in Burma. The suggestions of the Conservator of the Pegu circle with regard to giving adjacent villagers a direct interest in the safety from fire of reserves deserve attention. Mr. Ribbentrop also refers to the planting of belts of evergreen trees. Efforts in this direction do not seem to have been entirely successful, but several kinds of trees have done well. There can be little doubt of the benefit of such evergreen belts.

2. Protection in other ways.

6. In a part of the Tharrawaddy division only were systematic efforts made to clear creepers, to thin out trees, and to plant up vacant spaces. For no reserves except the plantations have we yet a forest survey with complete working plans. Until we possess surveys and plans, it will not be possible to convert these valuable properties into scientifically managed forests or to work them to the best advantage.

III.—Reproduction and Improvement of Forest Growth.

1.—The Reproduction of Teak.

(*a*).—Plantations managed by the Forest staff.

7. In the Tenasserim circle there are no regular teak plantations. There are three small experimental plantations, the aggregate area of which appears to amount only to about 23 acres. An examination of one of these plantations,

the Thingannyeenoung, which covers 16 acres of ground, showed that there were 957 trees above 2 feet in girth, some of them being from 4 to 6 feet in girth and having clear stems of 40 to 60 feet high. In the Pegu circle there are nine plantations, but of these two—Myodwin, 10 acres, and Yaneh, 9 acres—are of insignificant extent. At Magayee an area of 149 acres was planted with padouk and teak in the proportion of 1 to 14, at a cost of Rs. 12,230, with thoroughly satisfactory results. The total area of plantations is now 3,544 acres. Comparatively little expenditure is now incurred on the extension of regular teak plantations on this system until we have fuller experience of the cheaper, and apparently efficacious, system of toungya plantations. Still the extension of these plantations will not, for the reasons given in paragraph 222 of Mr. Brandis's report, be wholly discontinued.

(b).—Toungya plantations.

8. In certain reserves arrangements are made with the Karen cultivators to plant their toungyas with teak, payment being made at the rate of one rupee a hundred for healthy plants. This system is fully described in paragraphs 209 to 216 of Mr. Brandis's report. In the Tenasserim circle the area planted in this way was increased during the year under review by 551 acres. The planting of the balance of 195 acres cost Rs. 1,046-6-1, or Rs. 5-5-10 an acre. The addition to the teak toungya plantations of the Pegu circle, which are as yet confined to the Prome and Tharrawaddy divisions, amounted to 521·38 acres. The cost was Rs. 3,056-8-0, or Rs. 5-13-9 per acre. In the Tharrawaddy division the high average of 839 plants an acre was obtained. In Tenasserim the early setting in of the rains in the Yoonzalin valley in 1880 interfered with the success of the toungya plantations.

The area planted with teak in toungyas on the 31st March 1881 was—

	Acres.
Pegu	2,471
Tenasserim	1,116
Total ...	3,587

The total area of toungya plantations made during the year was 1,072 acres; but in this total are included 356 acres partly done during the preceding year. In future years we hope to work fully up to Mr. Brandis's scheme of adding at least 1,000 acres of teak toungya plantations annually. The cost of teak toungyas has up to date been Rs. 8-1-1 per acre, as compared with Rs. 14 per acre as estimated by Mr. Brandis. A good deal more has to be spent on the maintenance of the toungya plantations of this and of past years. In one plantation, Choungzouk, the cost of weeding toungya plantations of the second year was allowed to reach Rs. 7 an acre, which is much too high. The cost of regular plantations has up to date been about Rs. 90 per acre. The toungya plantations so far are successful and promise very well. No toungya plantation is as yet so old or so promising as the best parts of the Magayee and Pyoonchoung plantations. But in toungya plantations teak will have more chance of growing according to its natural habit on slopes and uplands rather than in bottoms, and along with other forest trees rather than alone.

Introduction of new descriptions of trees and plants.

9. Details are furnished in the reports of the cultivation of various foreign trees and plants.

Para India-rubber, *Hevea Brasiliense*.

The Para India-rubber plant is cultivated at Mergui. The success of the experiment appears to be variable. Some of the plants have done well. Those received from Calcutta in 1877 are flourishing. Of 178 cuttings received from Ceylon in 1879 only 60 survive, but they are thriving. Of 24 plants raised in the previous rains only three survive, and it is suggested that the cuttings should be kept under glass frames. Out of 80 cuttings planted in the cold season, 50 are favourably reported on.

Castilloa elastica.

There are two specimens of *Castilloa elastica* at Mergui.

Ceara (Manihot Glasiovii).

There are now 637 *Ceara* plants in the plantation at Mergui. They seem to grow well; some have seeded, and the seed has been collected. The young seedlings are so liable to be attacked by ants and other insects that the seeds have to be sown separately in baskets placed in a framework over water.

The Mergui plantation contains 32 akyaw plants, one cocoa, and four vanilla plants, and 24 rain-trees.

Mahogany.

There are also 100 mahogany plants said to be doing well. Eighty plants have been set out in a small experimental plantation of 1½ acres near Amherst, and 79 of them are in a satisfactory condition. In the Pegu circle there are 47 mahogany plants growing at Magayee. Two packets of mahogany-seed were received at Toungoo, but only five seeds germinated. The Conservator remarks that the cultivation of mahogany is not yet a success. The seed sent is not good, and in spite of the greatest care does not germinate. The young plant, however, is strong enough when once established.

Vanilla.

Vanilla plants seem to have done fairly at Magayee, but

Pithecolobium saman.

Pithecolobium saman does not thrive there, 94 plants of two years' growth having died in the hot season.

Coffee.

Coffee is grown at the Pyoonchoung reserve and at Thandoung. At the former only 380 plants out of 10,000 survived the hot weather; at the latter there were 15,000 plants left from 17,000 seedlings put out. It is supposed the seedlings were put out too young. The Conservator is hopeful of the success of coffee cultivation.

Tea.

Tea is grown at the same places as coffee, but does not do so well.

Cinchona.

Cinchona is also grown at Pyoonchoung and Thandoung. At Pyoonchoung the weather is considered too hot for cinchona, only 48 plants having survived out of 7,000. Cinchona has succeeded better at Thandoung, but even there the heat is too great for the trees,

and the Conservator believes that irrigation is essential before the trees can flourish. Government offered a reward of Rs. 100 to induce Karens to undertake the cultivation of cinchona, but not a single application for plants has been made.*

The expenditure on experimental cultivation is stated at Rs. 2,815-6-0 in the Tenasserim and Rs. 4,869-9-0 in the Pegu circle.

IV.—The Protection and Working of Forests not included in Reserves.

10. In the unreserved forests the Forest Department can act for the protection of teak and certain kinds of trees which have been declared reserved under the forest rules. Teak is regarded generally throughout the country as a royal tree and is safe from destruction, except in some places where toungya cultivation is practised. During the year notice was given that the provisions of the Forest Act of 1865, which were before only partially applicable, would be extended, with effect from the 1st November 1881, to the whole of the Pegu division and to the Tenasserim division west of the Sittang east watershed. One object of this measure was to accustom the people to the law which will be in force as soon as the Forest Bill for Burma is passed by the Legislature. Ample time was allowed to the people to make arrangements for disposing of any reserved timber regarding which they might previously have entered into contracts. Generally speaking, teak can be felled only by the Forest Department or with the permission of its officers. It is therefore effectually protected, except from fire and other dangers incidental to all forests in common. It is anticipated by the Conservator, however, that when the forest areas now demarcated or selected are finally sanctioned as reserves, there will be few teak localities of importance left in the unreserved forests of Tenasserim. In the Pegu circle all that is possible is being done towards the reservation of teak-producing tracts, but in a few places it is found necessary, in the interests of the inhabitants, to allow toungya-cutting in such tracts. As an instance of the light in which teak is regarded by the people, it may be noted that in the Tharrawaddy division teak trees growing on the ridges between paddy-fields have been sold by the Forest Department in many cases to the cultivators themselves, the right of Government to the trees being fully recognized. Effort will be made during the next two years to complete the sale of all teak trees situated in or close upon private lands.

Girdling.

11. Teak trees fit for felling in unreserved forests are selected and girdled by the Forest Department. Girdling was carried on during the year under review with care and at the same time with considerable results, especially in the Pegu circle. The number of teak trees girdled in this circle amounted to 21,496, the cost being Rs. 4,599.

In Tenasserim 1,350 teak trees were girdled. The cost is stated at Rs. 551. Of trees of other kinds, 252 padouk trees were girdled in Tenasserim, and in Pegu 1,516 pyinma trees. The attention of Conservators has been drawn to the expediency of girdling more trees of kinds other than teak. The Public Works Department have decided to curtail their use of teak and to use other

* Enquiries have been made, both in Arakan and in Tenasserim, with the view of selecting a site thoroughly adapted for the cultivation of cinchona. As yet no suitable place has been discovered sufficiently near to markets and to the labour-supply to warrant expenditure on an experimental plantation.

timbers as far as possible. Hitherto our Engineers have used teak almost exclusively for all timber work, except sleepers, bridge, and house posts, for which pyingado has been freely employed. The Burma forests possess many other most excellent woods; but these woods have as yet not been prepared regularly for the market. By girdling yearly some thousands of other trees, a regular supply of good seasoned timber of other kinds will be maintained for the Public Works Department and for private consumption. By this means it is hoped that the local expenditure of teak will be reduced and more teak will be set free for exportation to Europe and India.

Trees other than teak.

12. Trees other than teak are not protected in unreserved forests, with the exception of those of a few kinds, such as padouk, thitka, kanyin, &c., which are declared to be reserved. In the case of these trees the protection afforded extends only to the prevention of excessive felling by timber-traders and others, it being necessary to obtain a permit, and for trade purposes to pay a felling fee and duty in order to be allowed to cut trees of the reserved species. The size of the trees that may be felled is not prescribed, and the trees may be cut without restraint for purposes of toungya and other cultivation. In parts of Tenasserim, where teak is not abundant, arrangements are being made to select reserves containing padouk, thingan, pyingado, kounghmoo, and other trees. In the Tharrawaddy division near the Irrawaddy river a valuable In forest will be demarcated next season.

Cutch

13. The cutting of one species of timber, cutch, is subject to special regulation, a fee, which varied in different districts, being levied on the manufacture according to the number of cauldrons used. The fee has now been raised to Rs. 20 per cauldron. Cutch trees in reserves are sold standing and fetch good prices. Outside reserves the supply of large cutch trees standing in accessible places is comparatively small.

It is estimated that 436,500 cutch trees were felled during the past season. The production of cutch was much stimulated by high prices, and unusually large numbers of persons, both from British and from Burmese territory, devoted themselves to the business. If cutch continues dear, the increase in the fee imposed on production is not likely to have much effect. Existing cutch trees can hardly last long at the present rate of consumption, and measures are being taken for the reproduction of the tree, which happily grows freely and rapidly on land protected from fire and the toungya-cutter's axe. Arrangements have been made for selecting and reserving small cutch-yielding areas at various spots in Thayetmyo district, but probably operations on a more extensive scale will be required if this province is to continue to be a cutch-producing country.

V.—Revenue.

14. Revenue is raised by the sale of teak and other timber extracted from the forests and of unclaimed drift timber collected by the Forest Department and its agents by granting permits for felling timber and taking forest produce at certain rates; by charging a duty on the tonnage of the timber felled; by levying

a duty on timber brought in to the province from forests belonging to foreign States. During 1880-81 the yield of the forests in Burma was as follows :—

	Teak.	
	Number of logs and pieces.	Quantity. Tons.
Tenasserim circle—		
By Government agency	12,111	4,480
Under free grants	170	102
Drift from Government forests	178	168
From leased forests	2,164	1,298
Total from British forests	14,623	5,998
Unclaimed drift from foreign forests	5,066	2,895
Used for depôt purposes	29	14
Total ...	19,718	8,907
Pegu circle—		
By Government agency	12,589	11,564
By purchasers	677	282
Teak trees, thinnings, &c., sold in paddy land ...	8,247	1,500 (estimated)
Total ...	21,513	13,346
GRAND TOTAL ...	41,231	22,253

The quantity of teak timber extracted during the last five years has thus been—

	Tons.
1876-77	46,431
1877-78	39,081
1878-79	22,763
1879-80	17,585
1880-81	22,253

The extraction of timber other than teak was as below :—

	By Government agency.		Under trade permits.		Under free permits.		By lease-holders.		Total.	
	Logs and sleepers.	Tons.	Logs.	Tons.	Logs.	Tons.	Logs.	Tons.	Logs.	Tons.
Tenasserim circle ...	8,745	1,281	3,432	2,964	10,250	8,815	677	595	23,104	13,655
Pegu do. ...	2,042	1,638	14,229	...	67,674	...	...	...	85,866	...
Total ...	10,787	2,916	17,661	...	77,924	...	677	595	108,970	...
By purchasers ...	1,921									
Total ...	12,708									

The prices of timber, which had previously been depressed, began to rise towards the latter part of the previous year and continued to improve during 1880-81, and thus the revenue derived from the timber extracted from the forests was proportionately increased.

The revenue realised by the Forest Department during 1880-81 amounted to Rs. 15,16,613-1-2, as against Rs. 11,80,189-14-10 in 1879-80,—an increase of Rs. 3,36,423-2-4. The revenue was derived from the following sources:—

		Rs.	A.	P.
Timber and other produce removed from the forests by Government agency		8,61,486	13	0
Timber and other produce removed from the forests by consumers or purchasers.	Timber	94,951	1	4
	Firewood and charcoal	1,497	0	0
	Bamboos	1,890	4	0
	Grazing and fodder grass	78	12	0
	Other minor produce	90,668	7	11
Confiscated drift and waif wood		1,28,099	1	0
Duty on foreign timber and other forest produce		3,25,201	2	0
Miscellaneous		12,740	7	11
Total ...		15,16,613	1	2

The importation of foreign teak timber is given below:—

	Logs, &c
By the Irrawaddy	5,404
By the Boolay and Mindone streams	2,096
By the Sittang	9,765
By the Salween	87,951
Total ...	105,216

The timber imported by the Salween came to 109,080 tons, a falling-off from the previous year of 15,568 tons. This decrease was, however, more than compensated for by the superior quality of the timber. In 1879-80 the duty realised on foreign timber was Rs. 2,32,692-14-0, so that the revenue has increased by Rs. 92,508-4-0.

General financial results.

The total receipts on account of forests were, as stated above, Rs. 15,16,613-1-2; the expenditure was Rs. 7,12,568-8-0, leaving a surplus of Rs. 8,04,044-9-2.

15. The following statement exhibits the principal heads of expenditure:—

EXPENDITURE.

	Rs.	A.	P.
A —Conservancy and works—			
Removal of timber and other produce by Government agency ...	3 36,678	11	9
Consumers or purchasers	8,070	14	8
Management of confiscated, drift, and waif wood	40,943	0	0
Purchase and keep of cattle	20,752	8	0
Roads and buildings	9,221	1	2
Demarcation, improvement, and extension of forests—			
Demarcation...	21,717	9	11
Compensation for land and rights	1,750	0	0
Survey and working plans	745	0	0
Plantations	17,000	5	0
Protection from fire	10,224	5	11
Other works	5,472	4	4
Miscellaneous...	5,290	10	0
Total ...	4,77,866	1	9
B.—Establishment—			
Salaries	1,92,710	9	4
Travelling allowances	32,053	6	6
Contingencies	9,988	6	5
Total ...	2,34,702	6	3
GRAND TOTAL ...	7,12,568	8	0

The decrease in expenditure on extraction of timber by Government agency is due to the falling-off in the out-turn of the Prome and Toungoo divisions.

General.

Breaches of the forest law.

16. In the year 1880-81 prosecutions were laid in 114 cases against 176 persons, of whom 151 were convicted in 95 cases. The figures do not differ to any remarkable extent from those of the year before. In one case an impudent swindle was committed in Tharrawaddy, where some rogues personated Forest Officers, and in that character openly disposed of the right to extract timber of the reserved kinds in several circles of the district for Rs. 200 a circle, but this offence fell under the general criminal law rather than under the Forest Act.

Exports of timber.

17. The exports of teak timber from Rangoon during the year under review are stated at 37,875 cubic tons, valued at Rs. 26,68,361; of those from Moulmein at 113,399 cubic tons, valued at Rs. 75,29,950. The total exports of the last three years compare with the figures given in Mr. Brandis's report thus:—

	Tons.
Mean annual teak export from Burma to India and other countries during the five years ending March 1879...	134,563
Teak exports during year ending March 1879	133,820
Ditto ditto ditto 1880	121,161
Ditto ditto ditto 1881	151,274

The rise in price had apparently had considerable effect in extending the trade, and in permitting the export of descriptions of teak that formerly would not have been worth carrying to Indian or foreign markets.

Of timber of kinds other than teak, 187 tons were exported from Rangoon and 1,763 tons from Moulmein. From Tavoy 250 tons of timber, chiefly pyingado sleepers, were exported.

Floating streams.

18. Reference is made in the report for the Pegu circle of the difficulties experienced in conducting floating operations in streams which have been obstructed or caused to silt up through the working of fisheries. The question is receiving full consideration; many fisheries that caused stoppage to streams or impeded drainage have been closed; and orders have issued for the regular enforcement of the prohibition against permanent obstructions in other cases. In any case where fisheries impede forest operations, the local Forest Officer should lay the matter before the Deputy Commissioner, who will either apply lawful remedies or report upon the desirability of closing or modifying the terms of the leases of the offending fisheries.

Forest work in Arakan.

19. During the year under review a Forest Officer was appointed to the Arakan division. There has not yet been time to judge of the nature and extent of the operations which it will be expedient to undertake for the protection of forests and the realization of revenue in this division. The local opinion so far is that little can be done at present, the condition of Arakan being too backward for the introduction of the system which is found useful and profitable in the rest of the province.

20. Progress was made towards the establishment of an important industry in the conversion of bamboos into paper-stock. Mr. Routledge, the paper-manufacturer, was in active communication with the Government of India on the subject, and in the dry season Mr. Pratt Barlow, on behalf of Mr. Routledge and other paper-manufacturers, paid a visit to Burma and saw for himself the principal bamboo-producing localities. The negotiations with Mr. Routledge have now advanced to a point where it rests with himself to commence operations.

Use of bamboo for paper-stock.

21. During 1880-81 the various forest divisions were so arranged as to bring them as much as possible into conformity with civil districts. The relations of Forest Officers to the Civil Officers in charge of districts, whose assistants they are in forest matters, were more clearly defined, and general rules for the conduct of business were laid down. These arrangements are based on proposals made by Mr. Brandis, and they tend materially to increase the facility and effectiveness of the administration.

Relations of Civil and Forest Officers.

22. Of six superior officers in Tenasserim circle, three suffered more or less from fever. In Pegu one officer died; another was obliged to leave the province after a prolonged and severe illness; and four others suffered at different times from fever. Superior officers have worked well and given much assistance. The subordinate staff have not, generally speaking, done well, some of them in Pegu circle having behaved dishonestly and corruptly. The Conservator says there are few really good men on the establishment. He should consider the matter and report how he would propose to remedy a state of things which must seriously interfere with the successful working of the department besides bringing it into disrepute.

Health of officers.

23. The Forest Bill which was submitted to the Government of India in May 1880 was, after consideration in the departments concerned, published in the *Gazette of India* in January 1881. Opinions on it were called for from selected officers, and after consideration of these and personal consultation with the Conservators, the Chief Commissioner submitted his final recommendations regarding the Bill in June last. It is hoped that the new law, which will regulate forest administration for the future, will be passed before the end of the current year.

New forest law.

ORDERED that a copy of the Report and of the Resolution be forwarded to each Conservator, Deputy Conservator, and Assistant Conservator of Forests.

Ordered further that a copy be forwarded to Commissioners and District Officers for information.

By order of the Chief Commissioner,

G. D. BURGESS,

Secretary.

REPORT

ON

THE FOREST ADMINISTRATION

OF

BRITISH BURMA

For the year 1880-81.

BY

Major W. J. SEATON, Conservator of Forests.

TENASSERIM CIRCLE.

CHAPTER I.

SUMMARY OF FOREST ADMINISTRATION.

1.—Area and Boundaries.

Increase in area of State reserves.

DURING the year the final demarcation of five reserves, aggregating 128 square miles in area, was sanctioned by the local Government, whereby the total area of State reserves was increased from 260 to 388 square miles.

Final demarcation of boundaries.

2. The boundaries of the newly-sanctioned reserves were all finally demarcated in accordance with the procedure noted in Rule XIV of the Forest Rules of 1865.

Proposals for reservation.

3. In the East Salween division seven proposed reserves, aggregating 143·68 square miles, were visited and reported on by a specially deputed Civil Officer in company with the Divisional Officer.

In the West Salween division the Civil Officer of the district reported on a total area of 61 square miles selected for reservation.

Proposals are in course of submission to the local Government for the reservation of 204·68 square miles, the total area approved of by the abovementioned Civil Officers.

Proposals have also been submitted for the reservation of an area of 10 square miles in the West Salween division below Dagwinzeik on the Salween, but the Civil Officer of the district was not in a position to visit it within the official year.

With the addition of the last-named area, the total area proposed for reservation during the year will amount to 214·68 square miles.

Preliminary examination and selection of areas suitable for reservation.

4. The forests on the Martaban range north of Moulmein, the Upper Yea forests, and the forests on the Toungbyouk-Mintha stream, Tavoy district, were severally examined, and proposals are about to be submitted for the reservation of about 20 square miles in the first and about 96 square miles in the last-named of these localities.

In the case of the Upper Yea forests, the examination was not sufficiently advanced at the close of the year to admit of the selection of any definite area.

5. In the case of the reserves referred to at page 208 of the Forest Administration Report for 1879-80, the local Government, a little subsequent to the close of the year under review, sanctioned the exclusion of an area of 1·5 square miles from the Beelin-Mehwaing reserve, thereby reducing its area from 13 to 11·5 square miles. This reduction will be made in annual statement form 45 of current year 1881-82.

Reduction in area of State reserves.

6. The cost of preliminary demarcation, inclusive of pay and travelling allowance of one Civil Officer, amounted to Rs. 3,696-8-6 and of final demarcation to Rs. 436-10-0, thereby making a total demarcation expenditure of Rs. 4,133-2-6.

Demarcation expenditure.

2.—Protection and Improvement.

7. Considering the long drought of the past dry season, fire-tracing operations may be considered to have been on the whole satisfactory.

Fire-protection.

Partial failures, aggregating 3,030 acres, occurred in the protection of the Wamoo, Sinzweh, Kaheeloo, and Okekangyee reserves in the West Salween division and in the Kyoon stream reserve in the Ataran division.

In the Dalce reserve the measures adopted for the protection of 800 acres were again unsuccessful, except in the case of the finer teak plantations, 30 acres in extent.

The result of these operations, as noted in statement form No. 47, shows a total area of 36,040 acres protected out of an area of 39,840 acres: compared with the previous year's operations these figures exhibit a decrease in the area actually protected of 6,201 acres, attributable to (1) a decrease of 3,330 acres in the areas attempted to be protected and (2) an increase of 2,871 acres in failures.

8. The total expenditure incurred in fire-tracing during the year amounted to Rs. 1,533-12-8.

Cost of fire-tracing.

9. Owing chiefly to the early setting in of the rains throughout the Yoonzalin valley in 1880, the cultivation of teak was not successful in every instance.

Cultivation of teak in reserves under the toungya system.

One hundred and ninety-five acres were stocked with teak plants at a cost of Rs. 1,046-6-1, or Rs. 5-5-10 per acre, inclusive of capitation-tax and cost of seed.

The countings taken in the plantations of the several reserves gave an average of 283 plants per acre, the highest being 527 plants per acre in the Beelin-Mehwaing and 420 plants per acre in the Sinzweh reserve. Of the three previous years' plantations 384 acres in all were weeded, and the boundaries around some of the older plantations were cleared and demarcated, the expenditure incurred in all being Rs. 710-10-8.

The total expenditure for planting, taxes, seed, and maintenance during the year amounted to Rs. 1,757-0-9.

10. As noted in paragraph 18 of the previous year's administration report, there are no regular teak plantations in this circle other than the small experimental plantations at Thingannyeenoung, Ataran division, and at Shwaygone and on Kolone island, Salween river, estimated hitherto as aggregating in all 17 acres. On examination in December by Mr. Aplin, the Divisional Officer, the Thingannyeenoung plantation of 1856 was found to cover altogether 16 acres, or 6 acres in excess of original estimate.

Regular teak plantations.

Countings and measurements taken by Mr. Aplin showed 957 trees as above 2½ feet in girth, some of the largest being from 4 to 6 feet in girth and having clear stems of 40 to 60 feet in height.

11. The growth of the eight young trees of *Hevea braziliensis* received in 1877 from Dr. King, Calcutta, continues satisfactory. They vary from 13 to 31 feet in height, the mean height being about 20 feet, and vary in circumference from 2 to 9 inches near the ground. Of the 178 *Hevea braziliensis* cuttings received from Ceylon in May 1879, the survivors have decreased from 64 to 60 by

Experimental cultivation of exotic and other trees.

the death of the weakest plants. The survivors are all healthy in appearance, and have an average height of 18 feet and an average circumference of 7 inches.

Attempts at propagating this species have been made with cuttings from the eight larger trees; but up to the present only 50 cuttings out of 80 are reported as doing well, and of the 24 raised during the previous rains only three have survived.

The two *castilloa* plants are thriving, and are respectively 5 feet and 6 feet in height.

The 241 *ceara* (*Manihot Glaziovii*) plants in the plantation during the previous year, with additional plants set out subsequently, make a total of 637 young trees well established in the plantation. The average height of the young trees is 6 feet, and the largest has a height of 21 feet and a circumference of 16 inches. Towards the close of the year 4,700 seeds were collected from the trees, from which it is expected a large number of seedlings will be raised.

The cocoa and four vanilla plants have grown but little; but the 100 mahogany plants are all doing well, and have attained an average height of 4 feet 1 inch.

The total expenditure during the year amounted to Rs. 2,815-6-0.

A small experimental plantation of 1·5 acres has been commenced near Amherst for the cultivation of mahogany plants. Of the 80 plants set out during the rains 79 are doing well, and at the close of the year had an average height of 2½ feet.

Breaches of forest rules in reserved forests.

12. In the West Salween division one Karen toungya-cultivator was prosecuted and fined in the Assistant Commissioner's Court, Papoon, for allowing his toungya fire to spread into the Wamoo reserve.

Seven Karens were also prosecuted and fined for unauthorized cutting of toungyas in the Beelin-Mehnanweh reserve.

One case was also under investigation at the close of the year of a forest contractor having caused a fire in the Okekangyee reserve.

Breaches of forest rules in the unreserved forests.

13. In the East Salween division four cases were discovered of breaches of Rules VI and IX, but the culprits could not be discovered.

Breaches of Rule IX, *viz.*, cutting toungyas in teak localities, were also discovered in the Ataran division, but, owing to the excitement manifested by the people on account of the census, it was deemed advisable to postpone the necessary enquiries.

Five cases of unauthorized felling of trees of other kinds were investigated, but the parties absconded beyond the frontier.

Six individuals were prosecuted and fined in the Yea district for unauthorized tapping of kanyin (wood-oil) trees.

In connection with the enforcement of the Kado Rules and control of the Salween river 78 cases were investigated, and resulted in the conviction and punishment by fine or imprisonment of 52 individuals and detention and confiscation of 301 logs belonging to 29 persons.

3.—Yield and Working.

Extraction of teak by Government agency.

14. The total quantity of teak timber extracted from the forests by Government agency during the year was 12,111 logs and pieces, or 4,430 tons.

Timber extracted under free grants.

15. Under free grants 170 logs, or 102 tons, of teak were extracted from the forests.

Drift teak timber from Government forests.

16. One hundred and seventy-eight logs, or 168 tons, of drift timber from the Government forests were collected during the year.

Teak timber extracted from the leased forests.

17. During the year the total quantity of teak extracted from the leased forests was 2,164 logs and pieces, or 1,298 tons.

Total yield of teak during the year.

18. The total yield of the teak from the British forests from all sources amounted to 14,623 logs, or 5,998 tons.

Unclaimed foreign drift teak timber.

19. During the year 5,066 logs, or 2,895 tons, of foreign drift teak timber being unclaimed became the property of Government.

Total quantity of teak collected from all sources.

20. The total quantity of teak extracted during the year, or obtained from the various sources noted in the foregoing paragraphs, amounted to 19,689 logs, or 8,893 tons.

Timber other than teak.

21. Timber other than teak, and chiefly of the reserved kinds, was extracted to the following extent:—

	Logs.	Tons.
By Government agency	8,745	1,281
Under trade permits	3,482	2,964
Under free permits	10,250	8,815
By lease-holders	677	595
Total	23,104	13,655

Drift timber operations.

22. During the year 5,057 logs, or 4,024 tons, of foreign drift teak timber were collected in addition to 178 logs, or 168 tons, of teak from the British forests.

Drift timber disposals.

23. From the timber collected during the year and the balance on hand at close of the previous year, *viz.*, 5,270 logs, or 3,689 tons, or a total of 10,481 logs, or 7,857 tons, the disposals were 2,781 logs, or 2,781 tons, made over to claimants, 5,066 logs, or 2,895 tons, sold in behalf of Government, and 69 logs, or 15 tons, converted for depôt purposes.

Disposals of timber.

24. The disposals of timber during the year, exclusive of drift timber, amounted to 13,383 logs, or 5,223 tons, of teak timber, 980 tons of other kinds of wood, and 12,957 pyinkado sleepers, equivalent to 899 tons.

Average prices realized.

25. The average prices realized were for teak Rs. 22-3-8 per ton, wood other than teak Rs. 37-12-4 per ton, and on sleepers Rs. 4-0-4 each, or Rs. 59-5-6 per ton.

Girdling operations.

26. During the year 1,350 I class teak trees and 252 padouk trees were girdled in the East and West Salween and Ataran divisions at a cost of Rs. 551.

Yield of the forests beyond the frontier.

27. The total quantity of foreign teak timber imported by the Salween river and reported at the Kado revenue-station was 87,951 logs and pieces, or 109,080 tons, which, compared with the previous year's importation, shows a decrease of 15,568 tons in the outturn of the foreign forests.

The decrease in tonnage was, however, more than compensated for by the superior quality of the timber.

The number of logs cleared on payment of duty, 7 per cent. *ad valorem*, amounted to 129,287 ; and the balance on hand in the Kado depôt at the close of the official year was 23,408 logs.

4.—Financial Results.

Total receipts and expenditure.

28. The total receipts and expenditure of the Tenasserim circle during the year were—

	Rs.	A.	P.
Receipts	6,50,060	13	1
Expenditure	2,70,591	1	11
Thereby leaving a net revenue of	3,79,469	11	2

CHAPTER II.

Reserved Forests.

I.—SALWEEN DIVISION.

29. As mentioned in previous year's report, paragraph 202, this division, which also comprises the Kado timber revenue division, contains no State reserves,

its boundaries embracing only the Lower Beelin and Thatone districts contiguous to the sea and the country in the immediate vicinity of the Salween river from the point where it enters British territory.

Selection of reserves.

30. At the suggestion of the Inspector-General of Forests, an examination was undertaken of the hills commonly known as the Martaban range, which extends northward from Martaban to Thatone.

In December Mr. Thellusson visited the villages and country in the immediate vicinity of the range and reported on the supplies of timber and minor forest produce obtained from it; and in February the Conservator examined the locality and selected an area of about 20 square miles as a State reserve for the protection of the various valuable trees in which the locality abounds and of the bamboo areas required for the use of the people.

The whole of the country on the west side, extending from the seashore to the very base of the range, is one vast open plain under paddy cultivation, with the exception of a few narrow belts of mangrove jungle near the sea.

A succession of large villages in close proximity to each other extends along the base of the range, and it is simply due to the steepness and rocky nature of the western slopes here, almost wholly occupied by evergreen forest, that denudation has not taken place over a large area.

The spurs on the east side are less abrupt, and occupied chiefly by deciduous forest and considerable belts of bamboo-jungle, which, if protected, will constitute a valuable source of supply to the population on both sides of the range, two cart-tracks having been lately made through the range by which forest produce can be removed to the western villages.

The principal valuable trees are thitsaybo (*Dipterocarpus grandis*), thabyay (*Eugenia grandis*), oukchinza (*Diospyros khritioides*), kanyin (*Dipterocarpus lævis*), and koungmoo (*Parashorea stellata*) on the west side, and toungthateh (*Garcinia kydia*), thitya (*Shorea obtusa*), sanzay *Murrya sp.*), and kiaysay (*Laurus kyaisai*) on the east side, where some koko (*Albizzia lebbek*) and thitpyoo (*Xanthophyllum glaucum*) are also to be found.

II.—EAST SALWEEN DIVISION.

1.—Area and Boundaries.

Reserves sanctioned during the year.

31. The following reserves were sanctioned by the local Government during the year:—

	Square miles.
Kamawkala	9
Mehpaleh East	60
Mehkaneh	30
Kyoukket	19
Mehgala	10
Total ...	128

The abovementioned reserves, with the Mehpaleh reserve of 20 square miles sanctioned in 1878-79, make a total area of 148 square miles reserved in this division.

Final demarcation of boundaries.

32. The boundaries of the five newly-sanctioned reserves were demarcated in accordance with Rule XIV of the Forest Rules of 1865, lines 12 feet broad being cleared wherever the boundaries were other than roads, streams, and other natural boundaries. The total length of lines thus cleared was 24 miles, and the number of boundary marks used, *viz.*, teak boards 18 inches by 4 inches by 1¼ inch, was 842. The work was commenced on the 14th January and carried on under the supervision of Mr. F. W. Thellusson in the Kamawkala, Mehpaleh East, and Mehkaneh reserves till the 11th March. In the Kyoukket and Mehgala reserves it was continued under the supervision of Forest-ranger Shway Oung and completed on the 24th April. The remoteness of these forests, all situated along the Siamese frontier, difficulty of procuring labour, and time required for transport of material to

site of work will explain the length of time occupied. Considerable delay was also occasioned by the difficulty of obtaining elephants of the Karens.

Expenditure incurred.

33. The expenditure on cutting boundary lines, including hire of elephants in the reserves, amounted to Rs. 338-10-0, or Rs. 14-1-4 per mile. If to this the cost of boards at 2 annas 4 pies each and 9 pie per board for nails and cost of transport to the forests, *viz.*, Rs. 97-14-0, are added, the total cost of final demarcation will be found to be Rs. 436-10-4.

Preliminary demarcation.

34. The forests on the Thoungyin valley, Amherst district, were visited by Mr. R. Phayre, C.S., Assistant Commissioner, as Forest Settlement Officer, and Captain T. C. Bingham, Deputy Conservator of Forests, and the following proposed reserves examined, the boundaries of which had been selected by the Conservator with the exception of the two in the Lower Thoungyin, which were selected by the Divisional Officer, Captain Bingham :—

		Square miles.
Middle Thoungyin.	North Myaywadee	·45
	South do.	·23
	Bolaydo	8.
Upper Thoungyin.	Onekraing	53·
	Gawlee	58·
Lower Thoungyin.	Mehthaway	19·
	Winsaw	10·
	Total ...	148·68

Except the North Myaywadee reserve and portions of the Bolaydo, Oankraing, and Gawlee reserves, aggregating 7½ square miles, the demarcation of the abovementioned areas was approved of by the Forest Settlement Officer, and the final report and proposals are in course of submission to the local Government.

Cost of preliminary demarcation.

35. The expenditure incurred in preliminary demarcation was Rs. 4,133-2-6, inclusive of pay and travelling allowance of the Civil Officer from February to May.

Preliminary examination and selection of reserves.

36. This work, which was commenced during the previous year, was brought to a close in the early part of the season, and resulted in the final selection of the reserves noted in the preceding paragraph. It may be said to complete the demarcation of the teak localities in the Thoungyin valley, as the outlying areas are only small and isolated teak tracts in close contiguity to villages and cultivation.

In the examination of the Upper Thoungyin and Middle Thoungyin forests linear valuation surveys were executed by the Conservator over an area of 508 acres, and the following results obtained within the areas selected for reservation :—

	On 100 acres.			
	I.	II.	III.	IV.
Onekraing	79	9	115	666
Gawlee	86	25	214	1,509

In the Lower Thoungyin, linear valuation surveys executed by Captain Bingham over an area of 336 acres gave the following result :—

	On 100 acres.			
	I.	II.	III.	IV.
Lower Thoungyin proposed reserve. ...	13	82	86	180

Inspection of boundaries.

37. In September and October the boundaries of the Mehpaleh reserve were examined by Forest-ranger Shway Oung and recleared in places, but over the whole they were found to be in good order. Many of the "small pattern" boundary boards 9 inches by 4 inches by 1½ inch were found cracked and fallen down, which proves them to be too small for the purpose required.

38. The Divisional Officer's time was again too much taken up with demarcation work to admit of undertaking the fire-protection of the Mehpaleh reserve demarcated during the previous year.

No works of improvement or protection in East Salween division.

39. No breaches of forest rules were discovered within the State reserves.

Breaches of forest rules.

III.—WEST SALWEEN DIVISION.

40. No addition has taken place during the year to the area of State reserves in this division, which are eight in number and aggregate 85 square miles in extent.

Sanctioned State reserves.

41. A little subsequent to the close of the year under review the local Government sanctioned a reduction of 1¼ square miles in the area of the Mehwaing reserve referred to in paragraph 208 of previous year's report. The necessary alteration will be made in annual statement No. 49 for the current year (1881-82). In the case of the Mehmanweh reserve, the local Government authorized the payment of Rs. 20 per family as compensation to families who were proved to have at times exercised toungya rights in the reserve.

Reduction ordered in area of Mehwaing reserve.

42. The following proposed reserves were reported on by Mr. J. C. Davis, Assistant Commissioner, in charge of the Salween district, and proposals for their reservation are in course of submission for the orders of the local Government :—

Preliminary demarcation.

	Square miles.
Pachoung	40
Mehthalouk	14
Lower Mehthalouk...	7
Total ...	61

The selection of the two Mehthalouk reserves was the result of a careful examintion of the Mehthalouk valley during the previous year by Mr. Aplin. The Pachoung reserve was surveyed and selected by Mr. Ward, the Divisional Officer, during the year under review.

43. In addition to the Pachoung reserve noted in preceding paragraph, Mr. Ward selected and submitted proposals for the reservation of the following area on the bank of the Salween river below Dagwinzeik :—

Preliminary examination and selection of reserves.

Dagwin ... ... 10 square miles,

thereby making a total area of 50 square miles examined and selected this past season, which is certainly very creditable to this officer.

The Pachoung tract extends from the Pachoung on the Karennee frontier to the Padee stream within a few miles of the Kawloodo stockade, and has the Salween river as its eastern boundary. The remoteness of this tract from villages and cultivation and close proximity to the Karennee frontier rendered it necessary for a guard of 10 men of the frontier police to accompany Mr. Ward during his examination of the locality.

44. This reserve, 14 square miles in extent, was successfully protected, with the exception of about 500 acres burnt on the 14th March near the west boundary, where there is a large extent of "kaing," or elephant-grass, jungle and lower-mixed tree forest. The fire was suppressed by the forest-ranger and Kamoo cooly establishment near the Kwoon stream inner fire-trace; and the Divisional Officer reports that it was probably caused by hunters in search of deer, as there were traces of some men having passed the night at the mouth of the Shoke stream. This belt of kaing-grass jungle being a constant source of danger to the reserve, the attention of the Divisional Officer has been drawn to the necessity of inducing some Shans or Karens to undertake paddy cultivation in that part.

Fire-protection in Sinzweh reserve.

Of the outer fire-traces, the south-east boundary line, 50 feet wide and 2½ miles long, and the north-east boundary line, 12 feet wide and 3½ miles long, were recleared and swept at a cost respectively of Rs. 58-8-0 and Rs. 98.

New lines along the north and west boundary lines, 12 feet wide and 6 miles in length, were also cleared at a cost of Rs. 201. Three inner fire-traces, 30 feet wide and aggregating 10½ miles in length, were recleared at a cost of Rs. 147-8-0 and burnt at a cost of Rs. 64.

The total cost amounted to Rs. 589-8-0, to which has to be added Rs. 546-4-8 on account of Kamoo cooly establishment.

Protection from fire of Wamoo reserve.

45. This small reserve, 3 square miles in extent, was fire-traced by the forester in charge at a cost of Rs. 9, a line, 1 mile long, being cut and kept clear 10 feet wide along the south boundary, and the Papoon and Kawloodo high road being cleared on the west.

On the 9th April a Karen toungya-cutter having omitted to take proper precautions during the firing of his toungya near the reserve, his toungya-fire spread into and burnt 2 square miles of the reserve before it could be checked. Instructions have been issued for taking additional precautions in future for the protection of the reserve when toungyas outside are being fired.

Protection from fire of Kaheeloo reserve.

46. Of this reserve only 1,280 acres were fire-traced by the forester in charge, the remainder, comprising evergreen forest, being in no danger of fire. As usual two small pathways, aggregating 10 miles in length, were swept and kept clean to a width of 10 feet at the small cost of Rs. 20. They however failed to check a fire believed to have been originated by a timber-cutter outside the reserve, and the Divisional Officer reports about 400 acres at the south-east corner as having been swept by the fire before it could be checked. The fire did not penetrate into the thitka tract or any of the small plantations lately commenced.

Fire-protection of Mohnanweh reserve.

47. This reserve, 3,840 acres in extent, was successfully protected by the forester, assisted by the Karens, at the small cost of Rs. 3. The reserve has excellent natural fire-resisting boundaries; and the Karens in the vicinity being careful to exclude fire from their toungya-grounds, the only danger arises from travellers and pedlars proceeding along the high road to Shwaygyin and Papoon.

Fire-protection of Mehwaing reserve.

48. The forester in charge, assisted by the Karens, successfully protected this reserve, 8,320 acres in extent, at a cost of Rs. 23 for clearing pathways 14 miles in length to a width of 10 feet.

Fire-protection of Donedamee, Okekangyee, and Beelakatgyee reserves.

49. The only portion of these reserves forming one block which can be definitely protected is the southern part of the Okekangyee reserve, extensive stretches of the kaing-grass jungle on the Donedamee river extending into the reserves in narrow veins, rendering protection of the entire area utterly impossible, except by incurring very heavy expenditure, which would not be warranted by the value of these forests.

During the previous year the early rains enabled the Karens to protect a considerable portion of Beelakatgyee reserve, but during the year under review all attempts failed.

In the Okekangyee reserve however as large an area as 8 square miles was protected, including the southern portion, with the exception of an area of 320 acres near the Okekangalay stream, where are two small plantations, of 1877 and 1878, 16 acres in extent. On two occasions fires broke out inside the Okekangyee reserve, and are attributed to a contractor engaged in the extraction of dead timber, there being strong evidence against the contractor's people.

Orders have been issued prohibiting any timber-work in fire-traced reserves after the end of January.

The cost of clearing fire-lines 9 miles in length and 10 feet broad was only Rs. 37, which, with Rs. 4 for capitation-tax, makes a total of only Rs. 41.

Total area protected and total cost.

50. The total area successfully protected in this division is 26,940 acres out of an area attempted of 28,480 acres This, compared with the results of the previous year, shows a decrease of 8,280 acres.

The total cost of successfully protecting 26,940 acres was Rs. 1,231-12-8; but of this Rs. 1,135-12-8 represents the cost of protecting the Sinzweh reserve, which is the only regularly fire-traced reserve in this division, all the other reserves possessing either natural fire-resisting boundaries, like the Mehnanweh and Mehwaing reserves, or not being sufficiently valuable to warrant the heavy expenditure incidental to definitely fire-traced reserves.

Teak toungya plantation in Sinzweh reserve.

51. Teak was cultivated over an area of 112 acres, but, owing to delay in some instances in distribution of seed and the early rains referred to in paragraph 112 of previous year's report preventing a satisfactory burn of some of the toungyas, indifferent results were obtained over 36 acres, the countings on which showed only an average of 67 plants to the acre. Next rains, if this area is kept cleared, a larger number of plants may yet spring up, teak seed often germinating a year after sowing; but in the meantime it will be excluded from the plantation statement, which will thereby show only 76 acres as successfully planted. No payments have been made for plants on the 36 acres.

Over the remaining 76 acres the countings gave on an average 420 plants on the acre, the minimum being 85 and the maximum 1,252 plants per acre.

The amount paid for planting was Rs. 243-6-0 and for taxes Rs. 99-3-11, hire of Kamoo coolies and purchase of teak seed Rs. 193, making a total of Rs. 535-9-11.

The toungya plantations of 1877 and 1878, aggregating 131 acres, were cleared; and 356 acres of 1879 were cleared twice on account of the rapid growth of bamboos.

The expenditure incurred on this work and clearing the boundaries of some of the older plantations amounted to Rs. 546-4-8.

As noted in paragraph 211 of previous year's report, doubts were entertained as to the correctness of the countings made by the forest-ranger in the plantations formed that year.

Plantations of 1879.

52. On the Divisional Officer and Conservator inspecting them during the rains of 1880 after the necessary clearings had been made plants were found in great abundance, from which it would appear that countings are not to be depended upon when made late in the dry season when the plants are without leaves. As these plantations are specially referred to in the Inspector-General's suggestions regarding forest administration of the 20th January 1881 as not being very successful, a special counting was made in the presence of the Conservator in September of the plants in one particular toungya, in which, during the Inspector-General's visit, only two dozen plants were found. The countings gave as many as 800 odd plants on the toungya.

Toungya plantation in Wamoo reserve.

53. In this reserve 25 acres were planted with teak, inclusive of the area occupied by the Shans without the Divisional Officer's permission, as noted in paragraph 225 of previous year's report. Seed was supplied to these individuals; but the results were not satisfactory, and of the 25 acres cultivated only 5 acres were found to have been successfully planted and to contain on an average about 160 plants per acre.

The cost of planting was Rs. 5-10-0 and of clearing one acre of 1879, Rs. 6.

Toungya plantation in Kaheeloo reserve.

54. The area of toungyas cultivated with teak was 23 acres; but for reasons similar to those noted against the Sinzweh reserve, successful results were only obtained over 10 acres, on which the countings showed an average of 144 plants per acre.

The cost of planting was Rs. 10, and for clearing 13 acres of 1879, Rs. 13-12-0 were paid. Rs. 20 were paid for teak seed and Rs. 47-9-5 as capitation-tax and hire of cooly in charge.

Toungya plantation in Mehwaing reserve.

55. The cultivation of teak was very successful in this reserve during the past year. Out of an area of 43 acres, 40 acres were successfully cultivated at a cost of Rs. 218-8-6, the countings showing an average of 527 plants to the

acre. Success was doubtless due to seed being collected within the reserve, and sown at a very early date, as well as to most of the toungyas escaping the early rain prior to being burnt.

The plantations of 1878 and 1879, 47 acres, were cleared at a cost of Rs. 12-8-0.

Teak cultivation in the Mehnanweh reserve.

56. In this reserve the early rains prevented the satisfactory burning of most of the toungyas, and out of a total area of 72 acres taken in hand successful results were only obtained over 46 acres, on which the countings showed on an average 158 plants to the acre.

The amount paid for planting was Rs. 52-8-0.

The plantations of 1878 and 1879, aggregating 20 acres, were cleared at a cost of Rs. 10-8-0.

Toungya plantations in Okekangyee reserve.

57. In this reserve only a small area of 9 acres were planted with teak at a cost of Rs. 18-9-0.

The countings show an average of 290 plants to the acre. The plantations of 1877 and 1878, 16 acres in extent, were cleared at a cost of Rs. 48.

Breaches of forest rules.

58. The Karen whose toungya-fire was allowed to enter the Wamoo reserve was prosecuted in the Assistant Commissioner's Court and fined Rs. 30.

Seven Karens were also prosecuted for cutting toungyas within the Mehnanweh reserve and were fined Rs. 15 each. The case against the contractor for setting fire to the Okekangyee reserve is still under investigation.

Communications.

59. Temporary rest-houses were constructed for shelter in the rains in the Kaheeloo and Mehwaing reserves, and one of a more permanent description in the Sinzweh reserve, at a total cost of Rs. 60.

IV.—ATARAN DIVISION.

State reserves.

60. No increase has taken place in the area of State reserves in this division which were demarcated in 1879 and aggregate 155 square miles.

Inspection of boundaries.

61. During June and July the boundary lines of all the reserves were examined by Forest-ranger Moung Nyongalay and cleared wherever necessary, for the passage of elephants.

Very few of the boundary boards, all of which are of the old pattern, 18 inches by 12 inches by 1 inch, were found missing or in need of repair.

Portions of the boundaries of all but three of the reserves were also inspected by the Divisional Officer, Mr. Aplin, who reports the growth of bamboo, chiefly the wagoke or bending bamboo, as so rapid as to necessitate the recutting of the lines every four or five years, notwithstanding elephants two abreast being taken along the lines in the rains.

Fire protection in Dalee reserve.

62. The measures undertaken to protect 800 acres of this reserve again proved unsuccessful, except in the case of the fine teak plantations on the Mehthalouk stream, covering an area of 30 acres.

In February and early in March fire-traces 25 to 30 feet broad were formed in every way similar to the fire-traces in the Kyoon stream reserve, both around and through the selected area, thereby dividing it into two blocks. Fires however broke out within those blocks, and are attributed by the Divisional Officer to people passing through the reserve, the first fire appearing while the forest guard was engaged in clearing around the teak plantations on the 10th March, and the next fire shortly afterwards on the 19th March. Until the new forest rules come into force, when the carrying of fire through the reserve can be prohibited, it is to be feared the success of these operations will continue very doubtful.

The total amount expended was only Rs. 68-8-0, inclusive of the hire of one man for nearly a month to assist the forest guard.

63. The investigation into the cause of the fire of the previous season, referred to in paragraph 230 of last year's administration report, showed that the fire commenced near the villages on the west side, and must have entered the reserve owing to the neglected state of the fire-trace. The Divisional Officer was however absent all the dry season on special duty in the West Salween division; and as the only forest-ranger available was occupied wholly with the protection of the newly fire-traced Kyoon choung reserve some 50 miles to the south, the fire of 1880 in the Dalee must consequently be attributed in a great measure to the absence of the necessary supervision. Moreover, the reserve is unquestionably unsafe on account of bad characters from the Kyouktoung frontier, and, as the Divisional Officer observes, it is to be regretted that the forester is unable to find any one willing to reside permanently with him inside the reserve.

Investigation into cause of fire of 1880 in the Dalee reserve.

64. Of this reserve, which is about 17 square miles in extent, the area attempted to be protected was about 15 square miles, or 9,600 acres.

Fire-protection of Kyoon choung reserve.

In the formation of fire-traces the procedure adopted was to clear narrow parallel paths 25 to 30 feet apart and burn all inflammable matter on the entire space between them. With such fire-traces and the Kyoon stream, which forms a natural fire-resisting boundary, the area attempted to be protected was divided into six blocks of different sizes. Fires entered and broke out in two of the blocks and traversed about 300 acres in the one and 230 acres in the other. In the first of these blocks, which is situated in the angle formed by the Toungwaing and Kyoukkoung roads, the fire was the result of inattention to orders in the firing of a toungya cut for plantation purposes just within the south boundary. The toungya in question being at a distance from the other toungyas, the cultivator, contrary to his instructions, presumed to fire it singlehanded and the result was, as mentioned above, the burning of a considerable area in this block. In the other block, situated between the high road and the western boundary, fires broke out on two occasions, and can only be attributed to people passing through this portion of the reserve. On both occasions the fire was suppressed by the forest-ranger with the aid of the cultivators residing within the reserve.

The Divisional Officer, Mr. Aplin, reports that the season has been an exceptionally trying one on account of the length of time during which no rain fell; there was in fact no rain in this locality from the commencement of November to the first week in April, when there were a couple of showers, and again no more rain until the 7th May, when the rains broke.

The census operations caused a considerable emigration into Siamese territory from the villages in the vicinity of this reserve, and, as a consequence, the reserve was more frequented and traversed by the people than at other times.

The areas traversed by fire being in all 530 acres, the area successfully protected may be estimated at 9,070 acres.

In the fire-trace work the men employed were nearly all Lawa Shans of Tadaing village.

The total expenditure incurred was Rs. 233-8-0, made up of (1) cost of clearing and burning fire-traces Rs. 160, and (2) hire of three men for patrol duty from the 20th March to the 8th May, at Rs. 15 per mensem, Rs. 73-8-0.

65. With the sanction of the local Government 15 Karen families have been located by the Divisional Officer in the Kyoon choung reserve, subject to the condition of planting teak in toungyas and assisting in protection of the reserve against fire. Sanction was also obtained for employing 10 families in like manner in the Goongyee reserve.

Cultivation of teak in toungyas in the Kyoon choung and Goongyee reserve.

66. There was no planting in this reserve during the past year.

Teak cultivation in the Dalee reserve.

All the toungya plantations in the reserve, 46 acres in extent, were cleared early in July at a cost of Rs. 13, and were inspected by the Divisional Officer, Mr. Aplin, on the 22nd July.

The finest of the plantations, which are on the Mehthalouk stream, were found, with the exception of half an acre, to have escaped the fire of the previous dry season.

In the plantation of 1878 the largest trees measured 19 and 20 feet in height and 6 to 7 inches in girth, the dominant trees being about 15 feet in height. In the plantation of 1877 the largest tree measured was 31 feet in height and 10½ inches in girth.

In the remaining plantations on the Teepogalay and Kayin streams which were traversed by the fire of 1880 the Divisional Officer found the larger trees apparently uninjured.

The stools of the smaller plants which had been burnt back level with the ground had thrown out vigorous shoots.

Thingannyeenoung teak plantation of 1856 in Thingannyeenoung reserve.

67. The Thingannyeenoung plantation of 1856 was examined and surveyed by Mr. Aplin early in December and found to be 16 acres in extent, not 10 acres as originally estimated. The following is an abstract of girth measurements taken by Mr. Aplin of the trees which were above 2 feet in girth measured at 6 feet from the ground :—

	Feet.		Feet.			No.
Trees with girth from	2	to	2½	...	...	335
Ditto from	2½	to	3	...	...	282
Ditto from	3	to	3½	...	...	198
Ditto from	3½	to	4	...	...	129
Ditto from	4	to	4½	...	...	46
Ditto from	4½	to	5	...	...	10
Ditto from	5	to	5½	...	...	6
Ditto from	5½	to	6	...	...	1
Total of trees above 2 feet in girth					...	957

Mr. Aplin reports : " The trees are of remarkably good growth with magnificent " long straight stems. The length of the stems to the first branch ranges between " 40 and 60 feet, and the trees appear to be still growing in height. Considering " that the age of the plantation at the time of examination was but 24 years, we " have a remarkable instance of the rapid growth of teak in favourable conditions."

Twenty large trees, chiefly thingan *(Hopea odorata)* and pyinma *(Lagerstræmia reginæ)* were girdled within and on the borders of the plantation at a cost of Rs. 4.

Mahogany plantation near Amherst.

68. A small plot of ground 1½ acres in extent, contiguous to doorian and other orchards about two miles from Amherst, was taken up and enclosed at the commencement of the year for an experimental mahogany plantation. An application has been since made for extending the area to 28 acres, which represents all that is at present available.

Eighty mahogany seedlings (raised at Moulmein) were set out in the plantation early in the rains, and at the close of the year 79 were found to have an average height of 2 feet 6 inches, the smallest being about 1 foot and the largest 6 feet 3 inches in height. One plant, attacked by insects, was only 5 inches in height. No less than 25 of the plants have had their leading shoots attacked and eaten by insects ; and the stems of five plants were also bored by insects, but apparently without affecting their vitality.

Expenditure on mahogany plantation.

69. The expenditure incured on this plantation amounted to Rs. 229-12-0.

Breaches of forest rules.

70. No breaches of forest rules were reported within the State reserves of the Ataran division.

Communications.

71. The temporary huts erected for shelter in the rains in six of the reserves were repaired at a cost of Rs. 15. It is intended to replace these gradually by more permanent structures ; and arangements have been made for constructing two such buildings in the Kyoon choung and Goongyee reserves, in which some cultivators are now located.

V.—SOUTH TENASSERIM DIVISION.

No State reserves.

72. There are no State reserves in this division, no demarcation work having hitherto been carried on in this part of the Tenasserim circle.

Preliminary examination and selection of reserves.

73. The forests, chiefly evergreen, on the Mintha stream, a large tributary of the Toungbyouk stream in the Tavoy district, were examined by the Conservator in April with reference to their resources in thingan *(Hopea* species*)* and other valuable trees, and with special reference to the practicability of removing the rocky obstructions in the Mintha stream, which have hitherto effectually protected these forests from timber traders and others: these obstructions, although very numerous in the lower course of the stream, were not found to be as difficult of removal as had been reported, and two seasons will in all probability suffice for their removal. The services of Overseer deCosta, of the Pegu circle, will be obtained early next season for organizing a blasting party and setting the work on foot.

Thinganshway *(Hopea* species*)*, the most valuable variety of thingan and in great demand for boat-hulls, occurs in considerable profusion in the upper part of the Mintha and many of its feeders in places where the thingan forest has escaped toungya cultivation. Other varieties of thingan, which are in demand for house-building purposes, are also to be met with in considerable profusion, as well as koungmoo *(Parashorea stellata)*, also in demand for boat-hulls, and a tree of large dimensions *(Syndesmis tavoyana)*, known locally as "chay" or "thoomay" among the Karens, which has a dark red, close grain, heart-wood, weighing 66·7lbs. to the cubic foot unseasoned. As it floats when well seasoned, and is very durable as evidenced by old fallen trees lying undecayed on the ground for many years, it deserves attention as a wood likely to prove suitable for furniture purposes. It is said however to be rather brittle. As thinganshway occurs in narrow belts and veins along the banks of the streams, no linear valuation surveys could be held to ascertain the proportion of this valuable variety suitable for large boat-hulls; but, according to the estimates of the Karens, the number of sound trees above 7½ feet in girth, and worth Rs. 50 to Rs. 100 each as they stand, must be from 1,500 to 2,000 at lowest computation.

For the efficient protection of the Toungbyouk-Mintha forests it will be necessary to demarcate as a block reserve the entire area drained by the Mintha stream, except at the sources of its tributary, the Nanpayoke stream. An area of about 90 square miles in extent was selected by the Conservator, but of this a considerable portion will have to be demarcated as toungya-grounds for three small Karen hamlets.

Increase in area taken up for plantation at Mergui.

74. The area made over to the Department for plantation purposes 2½ miles from Mergui has been increased from 43 to 90 acres.

Cultivation of Para India-rubber (*Hevea braziliensis*) at Mergui.

75. The eight young *Hevea* trees, the survivors of the batch of plants received from Dr. King, Calcutta, in 1877 continue to thrive in the office compound and have attained the following sizes:—

No.	*Height,* Feet.	*Circumference.* Inches.
1.	31	9
2.	26	9
3.	26	7
4.	16	5
5.	18	Of this tree cuttings were taken.
6.	17	8¼
7.	16	2¼
8.	16	2

Of the *Hevea* plants in the Mergui plantation there were on hand at the close of the year 60 well-established plants, which have grown considerably, the average height being 18 feet and average circumference 7 inches. The 24 cuttings of the previous rains failed, with the exception of three, and, with the advice of Dr. King, Calcutta, the experiment was continued under glass-frames; but the

most satisfactory method is found to be that of placing out the cuttings under the dense shade of high evergreen forest. Of 80 cuttings set out in the cold season, 50 are reported as thriving well.

Cultivation of *Castilloa elastica.*

76. The two plants of this very valuable species are doing well at Mergui, and are now of the following dimensions :—

No.	*Height.* Feet.					*Circumference.* Inches.
1	6	...	...	...	...	4
2	5	...	...	...	...	3½

Cultivation of *ceara* (*Manihot Glaziovii*) at Mergui.

77. During the year 396 more seedlings were set out, making the number of *ceara* plants in the plantation up to 637. The growth of this species is remarkably rapid, the average height of the plants in the plantation being 6 feet. The largest is now 21 feet in height and 16 inches in circumference at 2 feet from the ground. The larger trees have commenced to seed, and 4,700 seeds were collected from them in December. The seed is of good quality, and up to latest date 300 are reported as having germinated. The young seedlings are very hardy, but so liable to be attacked by insects (ants in particular) that it has been found necessary to sow the seeds separately in small bamboo baskets placed on a framework constructed over water. The seedlings grow rapidly if exposed to the light, and are set out in the main plantation in baskets, which gradually rot and in no way interfere with their growth.

Cultivation of mahogany trees.

78. One hundred mahogany seedlings were received from Moulmein and set out along the west side of the planted area of the Mergui plantation. They are all doing well, and have an average height of 4 feet 1 inch.

Akyaw (*Aquillaria aggallochum*).

79. Of the akyaw, seedlings obtained from the forests were forwarded to Moulmein for despatch to Ceylon and 32 are in the plantation.

Other species.

80. The cocoa plant and four vanilla plants are not in a very flourishing condition. The latter will have to be placed at the foot of large trees where there is dense shade. Twenty-four rain-trees have been set out in the plantation, and a few hundred seedlings have been raised.

Communications and buildings.

81. Quarters for the overseer were erected in the plantation at a cost of Rs. 309-13-10.

Total expenditure on the Mergui plantation.

82. The total expenditure during the year was Rs. 2,815-6-0, inclusive of the pay of plantation establishment, *viz.*, one overseer at Rs. 50 and two gardeners at Rs. 12 each, or Rs. 74 per mensem.

CHAPTER III.

Unreserved Forests.

Protection of teak.

83. During the past season many of the more remote and outlying teak localities were visited by Divisional Officers in the East Salween and Ataran divisions and some few breaches of forest rules discovered.

The Conservator also made a careful examination of the teak tracts in which timber operations had been carried on during the rains in the Upper Thoungyin, but only one case of unlawful felling came under his notice.

It may be assumed that Rules VI and IX of the forest rules are on the whole well understood and respected ; but in frontier localities, such as the Thoungyin and Upper Ataran forests, there will always be the temptation to ignore the forest rules, unless a regular system of patrolling by forest subordinates can be carried out, coupled with visits at intervals by European officers. Hitherto the establishment available in the East Salween division has been far too small to admit of the enforcement of such a system, and the Divisional Officer's time has been too much taken up with demarcation and other work to allow of regular supervision.

During the year under review so much progress has been made in the preliminary selection and demarcation of reserves in the Thoungyin valley that but few teak localities of any importance are now left outside the limits of the future State forest area, and hence protection of teak in unreserved forests will occupy much less of the time of the forest subordinates.

The establishment has been increased for the protection of the reserves, and there will be no difficulty in having the outlying tracts near the reserves regularly visited. Captain Bingham is of opinion that the chief injury to which the outlying teak tracts are exposed is in the matter of young trees being destroyed and injured by Karen elephants hobbled and let loose in the most careless manner. This has also often come under the observation of the Conservator, and, as the practice of letting elephants loose is very common, special vigilance will be necessary on the part of forest subordinates to check this evil in teak localities.

Protection of trees other than teak.

84. The present system of declaring certain species reserved carries with it no protection, except against over-felling by timber traders. Such species may be felled in any number in toungya clearings, and there are no restrictions as to the size of the trees to be felled by holders of free permits. Matters as regards protection will remain much the same when the free permit system is abolished, and the only course open to be followed is that of demarcating the more promising areas as future sources of supply of valuable woods and bamboo to meet the demand which is sure to increase as population increases.

In the Ataran division the teak tracts are much more scattered; and in the former small isolated belts and numerous tracts are to be found outside the reserved forests. Although here, as in the Thoungyin, the population is exceedingly sparse, yet proximity to the frontier results in the forests being traversed by numerous suspicious characters, who as a matter of course have no respect for the forest laws either in the reserved forests or outlying unprotected areas. That the Karens are already aware that their liberties in this respect will be considerably curtailed by forest demarcation there can be no doubt, as their attitude in many parts of the unreserved forests, as remarked by Captain Bingham, is one of decided discontent.

In other localities, such as the Upper Beelin forests, in the West Salween division, and parts of the Ataran, the unpopularity of forest conservancy measures lies in a great measure in the restrictions affecting buffalo-owners, whose time-honoured custom has been to let large herds of buffaloes loose in the dry season in the forests for weeks in succession with no one to look after them, the owners occasionally only going to see where the animals are, although often wandering several miles from their villages.

Additional species declared reserved during the year.

85. During the year the following species were added to the list of reserved trees (other than teak): thitpyoo *(Lagerstræmia species)* thitto *(Sandoricum indicum)*. In the case of thitpyoo, reservation was recommended with a view to realize revenue on and check the heavy fellings by timber traders engaged in exporting timber to the Calcutta market for manufacture of tea-boxes.

Breaches of forest rules in East Salween division.

86. Three cases were discovered by the Divisional Officer, Captain Bingham, in the Thoungyin forests. One was a case of a teak tree 5 feet in girth killed in an old toungya clearing on the Teekalawta stream near the abandoned village of Eeweh in the Lower Thoungyin. The second case was of five teak trees standing girdled near the Kanwoot stream in the Lower Thoungyin, all girdled many years ago. The third was the case of several young teak trees lying felled in abandoned toungya clearings on the Pahehkee, a feeder of the Oankraing in the Upper Thoungyin. In none of these cases could sufficient evidence be obtained to show who the actual offenders had been. The case already noted as discovered by the Conservator was of a I class teak tree felled green by a Karen residing in Shan territory, but assisting a relative employed to work timber for the Government contractor. The culprit absconded, and orders have been issued prohibiting the employment of Karens residing in foreign territory.

Breaches of forest rules in Ataran division.

87. Near a small Shan village near the sources of the Zammee branch of the Ataran river several toungyas were discovered cut in a teak locality. The discovery was made while the census operations were in progress, and a large proportion of the population were abandoning their villages and emigrating into Siamese-Shan territory. The Divisional Officer, Mr. Aplin, very properly concluded under the circumstances not to take any action in the matter of this breach of rules until the country had quieted down.

In the upper part of the Zammee river Mr. Aplin also discovered five separate cases of breach of revenue notification rules in the felling of small thingan and thitka trees for canoes without authority. Before prosecution could be instituted the parties concerned all absconded.

In the Yay Lamaing township six individuals were prosecuted by the local forester for tapping kanyin trees without authority, and were fined Rs. 10 each in the Myooke's Court.

CHAPTER IV.

YIELD, WORKING, AND FINANCIAL RESULTS.

(a).—Timber and other Forest Produce extracted by Government agency.

Teak timber extracted by Government agency in Salween division.

88. The Salween division in this portion of the report comprises the East and West Salween and Ataran divisions, the timber from these divisions being all brought to depot at Moulmein and all the accounts of these divisions being incorporated in those of the Salween division.

The total quantity of teak timber brought to depôt during the year from the several forests noted in form No. 55 amounted to 12,111 logs and pieces, or 4,430 tons. Compared with the previous year's outturn these figures show a decrease of 905 tons, the natural result of the late suspension of girdling operations.

Quality of teak timber extracted under Government agency.

89. In the Thoungyin forests, from which the greater portion of the teak is received, the timber was obtained chiefly from dead and fallen trees and very old girdled trees which for various reasons had been hitherto left untouched. It consequently contained a very large percentage of unsound and inferior timber coming under the definition of II class timber.

The proportion between the sound and unsound Thoungyin timber brought to depôt was as follows :—

Sound	3,026
Unsound...	1,042

The remainder of the teak received at depôt consisted of short pieces and inferior logs from the Lower Salween, Houngthayaw, Donedamee, Hlaingbweh, and Pandaw forests, the produce of which is generally of inferior or II class quality.

Cost of extraction of teak timber by Government agency.

90. The expenditure incurred on the extraction of 4,430 tons of teak was Rs. 63,473, or Rs. 5-3-10 per log, or Rs. 14-5-6 per ton.

Out turn of timber of other kinds extracted by Government agency.

91. The out-turn of timber of other kinds extracted by Government contractors was as follows :—

	Logs.	Tons.
Padouk	366	147
Pyinkado	263	101
Thitka	354	560·5
Thitkado	2	3
Pinlay kanzoo	1	·5

making a total of 986 logs, or 812 tons.

The average cost of extraction was Rs. 17 per ton in the case of heavy woods and Rs. 7-3-0 per ton on light woods.

91*a*. Of the 263 pyinkado logs noted in preceding paragraph, 210 were converted into 743 sleepers 10 feet by 10 inches by 5 inches, at a cost of Rs. 2,014, or Rs. 2-11-0 per sleeper, inclusive of Rs. 1,188-8-0 expended on extraction of the timber from the forests. In addition to the sleepers, 8 tons of scantling were also obtained from the same timber.

Conversion of sleepers.

92. Arrangements were made for the extraction in 1881-82 of 17,400 logs and pieces teak timber and of the following quantities of timber of other kinds :—

Contracts for the extraction of timber in 1881-82.

	Logs.
Padouk	400
Thitka	2,000
Thitkado	200
Pyinkado	500
Do. sleepers	10,000
Pyinma	100
Thitpyoo	100

2.—Kado Timber Revenue-station.

93. The balance on hand at the Kado depôt at the commencement of the year was 66,907 logs teak timber, or 46,056 tons, and consisted of—

Balance at the commencement of the year.

		Logs.
Timber entered in	1877-78	10,020
	1878-79	8 598
	1879 80	48,289
	Total ...	66,907

94. During the year 87,951 logs and pieces, or 109,080 tons, of foreign teak timber were reported and entered at the Kado timber revenue-station from the following forests: —

Foreign timber entered at the Kado revenue-station during the year.

	Logs.	Pieces.
Karennee	60,966 ...	878
Kyaingtoung	8,299 ...	816
Nainglonegyee	5,772 ...	74
Thoungyin	6,192 ...	2,639
Dagwin	2,418 ...	402

95. The importation during the year, compared with that of the previous year, shows a decrease of 23,586 logs, or 15,568 tons; but this was counterbalanced by the larger proportion of timber of superior quality in the year's importation.

Falling-off in quantity of foreign timber imported.

96. The out-turn of foreign timber during the past four years is exhibited in Appendix C, and may be thus summarized :—

Out turn of past four years.

	Logs.	Tons.	Pieces.	Tons.
1877-78 ...	128,698 ...	141,475 ...	15,153 ...	7,574
1878-79 ...	98,195 ...	105,593 ...	27,238 ...	13,618
1879-80 ...	104,329 ...	123,222 ...	7,208 ...	4,322
1880-81 ...	80,642 ...	105,292 ...	4,309 ...	3,788

The out-turn of all the forests exhibits a decrease, compared with the previous year's yield, except that of the Dagwin forests. It is a satisfactory feature however that the Karennee out-turn, although falling short of that of the previous year by 5,749 tons, is nevertheless in excess of that of 1878-79 by 24,888 tons and of 1877-78 by 7,361 tons.

97. The number of logs and pieces of foreign teak cleared during the year was 129,287. Of this quantity the duty-paid timber amounted to 116,736 logs, and the duty realized thereon, at 7 per cent. *ad valorem*, amounted to Rs. 3,25,201-2-0. Although the quantity on which duty was paid was less than

Foreign teak timber cleared at Kado on payment of duty.

the previous year, yet, as shown by the following figures, the duty was more consequent on the higher prices ruling for timber of superior quality:—

	Number of logs.	Market value.	Duty at 7 per cent.	Average per log.
		Rs. A. P.	Rs. A. P.	Rs. A. P.
1879-80 ...	129,854	33,24,062 2 0	2,32,692 14 0	1 12 9
1880-81 ...	116,736	46,45,669 8 0	3,25,201 2 0	2 12 6

British timber reported at Kado during the year.

98. Of British timber, three logs teak and 711 logs timber of other kinds were reported at Kado, the former being Thoungyin permit timber extracted some years ago, but since lying neaped in the Salween river, and the latter being timber from the Meeteegeik leased forest in the Ataran district.

British timber cleared on payment of duty.

99. The following British timber was cleared on payment of duty as below:—

	Number of logs.	Value.	Duty.	Amount.
		Rs.		Rs. A. P.
Thitka ...	676	10,557	10 per cent.	1,055 11 0
Thingan ...	1	870	10 „	87 0 0
Teak (Thoungyin)...	2	at Rs. 2-12-0 per log.		1,454 11 0
Do. (Ataran) ...	822	at Rs. 4, Rs. 2, Rs. 0-4-0 & Rs 0-9-0 per log		
Do. (Pandaw) ...	1,842	ditto		

Balance of timber on hand at close of year.

100. The balance of timber at Kado at the close of the year consisted of stock of—

	Logs.
1878-79	855
1879-80	4,549
1880-81	18,004

or a total of 23,408 logs and pieces, of which about 20,000 had been sold, leaving about 3,000 only available for purchasers. The difference between the balance here shown and the number of logs actually remaining is due to the large uncleared balance of duty-paid timber at Kado on the 31st March 1881. During that month heavy duty payments were made on timber which could not leave the depôt before the close of the year 1880-81.

Registration of hammer-marks.

101. During the year 106 new marks were registered, and the registration of 143 old marks was renewed, the fees realized amounting to Rs. 2,490 on 249 marks.

Control of the Timber revenue-station and enforcement of the forest rules.

102. The control of the Timber Revenue division continued in the charge of Mr. Slym, Deputy Conservator of Forests.

During the year 78 cases, implicating 99 individuals, were tried by Mr. Slym for breaches of the Kado Rules and offences committed against timber in transit. Compared with the previous year's cases there was an increase of 36 in the number of cases and 50 in the number of persons tried as shown below:—

		1879-80.	1880-81.
Number of persons	fined	23 ...	50
Ditto	imprisoned	6 ...	3
	acquitted	11 ...	13
	whose timber detained ...	5 ...	5
	whose timber confiscated ...	4 ...	29
Number of logs detained and confiscated ...		104 ...	801
Amount of fines realized		Rs. 562 ...	Rs. 1,594

In addition to the above, one case, implicating three persons, was submitted to the Town Magistrate's Court under the provisions of section 45 of the Criminal Procedure Code, and resulted in one of the defendants being sentenced to two years' imprisonment. A second case of the theft of 26 logs, including one log of British Thoungyin timber, was also referred to the District Magistrate and tried by the Assistant Commissioner. Both the offenders being acquitted, consequent on some misapprehension of the marks on the timber, application was made to the Deputy Commissioner for re-opening the case under section 272.

103. As remarked by the Deputy Conservator the increase in the number of cases shows the necessity for the early passing of the new rules for the better protection of the trade. Higher punishments and rewards to informers will have a salutary effect, but at the same time it will be necessary for the Forest Officer trying timber cases to have higher powers.

Necessity for speedy adoption of new rules.

3.—Drift Timber.

104. At the commencement of the year there was a balance on hand of 5,270 logs and pieces, or 3,689 tons, of drift timber from the previous year.

Drift timber on hand and collected.

During the year under review the following teak timber was salved and brought to Depôt:—

	Logs.	Tons.
From the seashore	89	71
Ditto Salween river	4,600	3,680
Ditto Thoungyin river (old, stranded, and sunken timber)	522	417
Total ...	5,211	4,168

105. Out of the timber thus salved and balance at commencement of the year, or in all 10,481 logs, or 7,857 tons, the disposals were—

Disposals.

	Logs.	Tons.
Delivered to claimants	2,781	2,781
Sold by public auction	5,053	2,886
Transferred to Salween division as British timber ...	178	168
Converted for building purposes by Timber Revenue Department	29	14
Total ...	8,041	5,849

The timber, 2,781 logs, delivered to claimants consisted of 76 logs sea-drift and 2,705 logs river-drift and Thoungyin stranded timber, upon which were realized Rs. 503-8-0 and Rs. 8,743-14-0 respectively as salvage and collection dues, or in all Rs. 9,247-6-0.

106. Contrasted with the results obtained in 1879-80, the drift timber operations of the year under review show an increase in collection of 639 logs. The favourable prices ruling for II class timber also enabled the Department to dispose of a much larger quantity by public auction than during the previous year; and this and the larger quantity claimed, owing to the higher prices prevailing, will explain the small balance on hand at the close of the year, *viz.*, 2,440 logs.

Drift timber operations compared with those of previous year.

4.—Girdling Operations.

107. During the year 1,350 teak trees and 252 padouk trees were girdled in the following divisions:—

Timber girdled.

	Teak.	Padouk.
East Salween division	1,065	*Nil.*
West Salween division	244	*Nil.*
Ataran division	41	252

Orders were given for the girdling of 500 trees in the West Salween division; but the trees were found so scattered and the localities so rocky as to preclude more than the above number (244) being selected.

108. Full particulars of the localities in which girdling was carried on will be found noted in Appendix B.

Localities in which girdling conducted.

In the East Salween division it was carried on in the Lower Thoungyin district between the Mehthaway and Watheh streams; and in the West Salween

division chiefly on the hills drained by various tributaries of the Mehthalouk river, and to a small extent on the hills flanking the Salween river below the Dagwin stockade.

In the Ataran division the few teak trees which were girdled are outside the Nat choung reserve. In the case of the padouk girdling, the work was carried on between the Goongyee and Nat choung reserves east of the Zammee river.

Selection of trees for girdling and other work.

109. In the Lower Thoungyin district the trees for girdling were selected by Mr. Thellusson, and limited to trees 7 feet in girth and above, the removal of which would not be prejudicial to reproduction. To assist reproduction and improve the growth of teak, 142 trees of other kinds were also girdled and 581 creepers cut.

In the West Salween division, owing to Mr. Ward being occupied with demarcation work and the forest-ranger with the fire-protection of the reserves, the selection of the trees for girdling was entrusted to Karen contractor La Moo Hay. The trees selected are reported as being all of I class size, and occurring in small isolated patches of teak forest in the more steep and rocky localities which have hitherto escaped toungya cultivation. Before the close of the year Mr. Ward was only able to examine a few of the girdled trees in the more accessible localities on the Awlaw stream, between the Nat and Kawlaw Kalo streams, and near the bank of the Salween. The selection of these trees was found to be satisfactory. The remainder of the girdled trees was examined by Moung Tha Doon, goung in charge of the Kamoo establishment, Sinzweh reserve, and reported as having been satisfactorily selected and marked with the girdling-hammer of the year.

In the Ataran division the 41 teak trees which were girdled were selected by Mr. Aplin, the Divisional Officer, in the scattered patches of teak north and south of the Nat stream, and had a minimum girth of 7½ feet: only the very best trees and those capable of yielding good squares were selected; and as the teak patches were almost pure teak forest, it was not found necessary to girdle or fell any trees of other kinds. Only a few creepers were cut.

Labour employed and time occupied in girdling.

110. The padouk trees were selected by a reliable Burman, Moung Yan Shin, and are reported to be of a minimum girth of 6 feet and capable of giving logs of a minimum length of 15 feet clear of branches.

In the Lower Thoungyin district the local Karens and a few Kamoo coolies were employed in the work, which was commenced on the 18th March and completed on the 1st April.

In the West Salween division the work extended over February, March, and part of April; but it is evident the contractor and his Karens did not exert themselves much in searching for the trees.

The work in the Ataran was completed by Mr. Aplin in the case of teak trees girdled on the 19th and 20th March and in the case of the padouk trees between the 16th March and the 7th April. Only local Karen labour was employed.

5.—*Timber removed by Consumers and Purchasers free and on Trade Permits; also from Revenue-stations.*

Timber extracted under trade permits in Salween division.

111. During the year the following timber was extracted under B or trade permits:—

	No.	Tons.	Revenue realized. Rs. A. P.
Thingan (chiefly boat-hulls) ...	868	1844·4	8,313 8 9
Pyinkado	688	284·9	1,058 10 8
Pyinma	928	599·4	1,201 1 0
In	688	299 9	600 2 0
Thitsaybo	6	5 5	24 12 0
Thutya	6	2·5	11 4 0
Total ...	3,179	2,986·6	11,209 1 0

112. In addition to the above timber trade permits were also issued for the extraction of 4,917 logs and boat-hulls on payment of prescribed fees, amounting in all to Rs. 1,752-4-0, thereby making the total amount realized on trade permits up to Rs. 12,961-5-0 in the Salween division.

Out-turn under trade permits during the past four years in Salween division.

113. The out-turn under trade permits during the past four years in the Salween division was as follows :—

Years.	Logs.
1877-78	1,589
1878-79	2,361
1879-80	4,063
1880-81	3,179

Timber extracted under trade permits in South Tenasserim division.

114. In the Tavoy and Mergui districts timber extracted under trade permits amounted to—

		Logs.	Tons.	*Revenue realized.* Rs. A. P.
Thingan ...	Tavoy	44	47·5	185 9 8
	Mergui	16		
Pyinkado	Tavoy	198	20	96 8 0
Total	...	258	67·5	282 1 8

Trade permits were also granted for the extraction of 103 logs of thingan and pyinkado, the fees on which, *viz.*, Rs. 156-4-4, with the amount above-noted, makes a total of Rs. 438-6-0 realized on trade permits in the South Tenasserim division.

Out-turn of past four years in South Tenasserim division.

115. The out-turn under trade permits in the South Tenasserim division during the past four years was—

Years.	Logs.
1877-78	330
1878-79	199
1879-80	297
1880-81	253

Timber of reserved kinds other than teak granted under free permits in Salween division.

116. Free permits were granted by the civil authorities for the extraction of 7,044 logs of the following reserved kinds of timber other than teak :—

	Trees.
Thingan	37
Pyinkado	4,845
Pyinma	915
In	672
Ingyin	125
Thitya	133
Anan	317
Thabyay	10
Total ...	7,054

117. One hundred and seventy logs of inferior teak timber were given away under free grants out of timber felled on the land cleared for the road between Papoon and Tagoondaing.

Free grants of teak timber in Salween division.

Free permits of reserved kinds of timber other than teak in South Tenasserim division.

118. Free permits were issued in the Tavoy district for the following timber :—

	Trees.
Thingan	12
Pyinkado	256
Pyinma	16
Total ...	284

This is an exceedingly small number of trees, but is explained by the fact that only two of the 14 reserved kinds are found in any abundance in the Tavoy district.

Timber imported into Tavoy town free of royalty.

119. The demand for good wood for house-building and other purposes, &c., has increased of late years in Tavoy and in the Tavoy district. During the year the following timber was imported into Tavoy town (free of royalty) for house-building and other domestic purposes :—

	Logs.
Pyinkado	320
Karaway	731
Kinsaw	559
Thingan	590
Thingankyouk	2
Thinganpway or magalay	88
Thitto (since reserved)	150
Kyayseh	114
Thankoo	151
Kadoot	46
Meekyoungsay	44
Sanga	33
Yamanay	33
Toungpein	11
Mantin	18
Koungmoo	14
Maoo	8
Thaban	8
Thagakan	5
Thinwin	1
Pyinma	1
Total ...	2,922

Free permits in Mergui district.

120. No free permits were issued in the Mergui district owing to the sparseness of population and the absence of most trees of the reserved kinds. An additional reason is the large area not subject to the provisions of Act VII of 1865.

(6).—Minor Forest Produce.

Minor forest produce in Salween division.

121. In the Salween division the following sums were realized by sale of right to tap kanyin or wood-oil trees :—

	Rs.
Amherst district	102

Minor forest produce in South Tenasserim division.

122. The right to collect kanyin or wood-oil was disposed of in the Tavoy and Mergui districts for Rs. 2,855-8-0.

(7).—Yield during the year of the Forests in the occupancy of Government.

Summary of timber extracted during the year and unclaimed drift timber.

123. The total quantity of timber extracted from Government forests and of unclaimed drift timber collected during the year may be thus summarized :—

I.—Teak.

	Logs and pieces.	Tons.
By Government agency	12,111	4,430
By free grants	170	102
Unclaimed drift timber (British) ...	178	168
Total teak timber from Government forests	12,459	4,700
Unclaimed drift timber (foreign) ...	5,066	2,895
Total of teak timber ...	17,525	7,595

II.—Timber of other kinds.

By Government agency, inclusive of sleepers	8,745	1,281
Under trade permits	8,432	2964·1
Under free permits	10,250	8,815
Total of timber of other kinds ...	22,427	13060·1
Total quantity of teak and other timber brought to depot and revenue-stations ...	39,952	20,655·1

(8).—Yield of the Forests worked by Lease-holders.

Total yield of the leased forests.

124. The yield during the year of the leased forests was—

I.—Teak.

Ataran—	Logs.	Tons.
Meeteegeik and Meeteegeik-Kodoogweh held under 99 years' lease	822	493
Ataran, 30 years' holdings	*Nil.*	*Nil.*
Pandaw	1,342	805
Total ...	2,164	1,298

From the Pandaw leased forests, in addition to the above, 574 logs, consisting of undersized dead and fallen timber, chiefly tops and branch-pieces, were also extracted on account of Government, the lease-holder having no authority to remove any timber below 7 feet 6 inches in girth. These 574 logs are included in the quantity shown as extracted under Government agency.

II.—Timber of other kinds.

Ataran—	Logs and pieces.	Tons.
Meeteegeik and Meeteegeik-Kodoogweh ...	677	595

Disposals of timber during the year in Salween division.

125. During the year the disposals of timber by sale and private indent in the Salween division were as follows :—

	Logs.	Tons.	*Amount realised.* Rs. A. P.
By public sale of teak timber ...	1,933	1,200	27,240 8 2
By indent and private sales of teak timber	11,450	3,998	88,897 4 0
Sale of woods of other kinds ...	988	978	36,944 1 0
Sale of pyinkado scantlings ...	*Nil.*	2	124 14 0
Sale of hard-wood sleepers(including 7,420 despatched from Tavoy)	12,957	899	50,321 15 0
Slabs and log ends ...	*Nil.*	*Nil.*	270 0 0
Total ...	27,328	7,102	2,03,798 10 2

Average prices realized and average cost to Government.

126. The average prices realized according to the expenditure of the year were—

	Rs. A. P.
Teak—	
Per piece	8 10 10
„ ton	22 3 8
Woods of other kinds—	
Per piece	37 6 3
„ ton	37 12 4
Hard-wood sleepers—	
Per piece	4 0 4
„ ton	59 5 6

The average cost of the timber to Government based on the actual expenditure of the year was—

	Rs. A. P.
Teak—	
Per piece	5 2 7
„ ton	13 12 6
Other kinds of woods—	
Per piece	8 6 6
„ ton	10 3 2
Hard-wood sleepers.—	
Per piece	3 1 7
„ ton	44 11 2

The average cost to Government during the previous year was—

	Rs.	A.	P.
Teak—			
Per piece	9	8	9
,, ton	13	11	7
Other kinds of woods—			
Per piece	13	14	6
,, ton	11	8	5
Hard-wood sleepers—			
Per piece	3	1	11
,, ton	45	1	3

Shipping transactions.

127. Two hundred and thirty logs of padouk and 26 logs of teak were despatched to the Gun-carriage Factory, Madras; 29 tons of teak planks were also despatched to the Gun-carriage Factory, Fatehghar, as part of an indent for 70 tons. Before the close of the year an indent was received from the Gun-carriage Department, Bombay, for 100 teak squares and 100 logs of padouk in the round.

Arrangements were also entered into for purchasing pyinkado sleepers for despatch to Rangoon on account of the Sittang Railway.

Disposals of timber in South Tenasserim division.

128. As noted in paragraph 94, the disposals in the Salween division comprise 7,420 hard-wood sleepers despatched from Tavoy, which realized at Calcutta Rs. 30,096-8-0.

At Tavoy Rs. 36-8-2 were realized by the sale of eight teak squares collected on the seashore and Rs. 8 on one unclaimed pyinma log.

One hundred old and rejected undersized gangaw sleepers were sold to the Deputy Commissioner of Mergui for Rs. 25; and 10 drift teak logs at Malewoon, three pieces teak at Mergui, and one thingan drift log realized in all Rs. 70-4-11

Review of sleeper operations in South Tenasserim and Salween divisions.

129. At the commencement of the year the sleeper account stood as follows:—

		Pieces.
Total quantity of sleepers exported to Calcutta between 1878-79 and 1879-80 inclusive		13,545
Quantity disposed of during same period		5,859
Balance on hand on 1st April 1880... ...		7,686
Sleepers prepared and despatched to Calcutta in 1880-81 ...	Salween division ...	2,625
	South Tenasserim division	5,344
	Total ...	7,969
Total on hand and prepared 1880-81		15,655
Sleepers disposed of in Calcutta		12,957
Quantity on hand at close of year ...		2,698

(9).—*Financial Results.*

Revenue and expenditure in Salween division.

130. The accounts of the South Tenasserim division having, by permission of the local Government, been incorporated in those of the Salween division, as is done in the case of the East and West Salween and Ataran divisional accounts, the financial results of all these divisions are shown collectively under the Salween division. The receipts during the year amounted to Rs. 2,34,023-7-1 and the expenditure to Rs. 2,32,454-2-10, thereby leaving a small net surplus of Rs. 1,569-4-3.

Outstandings.

131. At the close of the year only Rs. 575 were outstanding on account of advances to contractors. All outstandings in favour of the Department at the beginning of the year on account of timber disposed of were realized.

Review of receipts.

132. The receipts under I*a* were Rs. 15,986-15-1 in excess of those of the previous year, owing to the larger quantity of timber disposed of and higher prices realized. Consequent on the increased out-turn from the Thoungyin forests, which came to hand only at the close of the official year, the financial position of the Department will be much better at the close of next year. Under II*a* there was a decrease of Rs. 4,880-13-9 consequent on a falling-off in the demand for thingan boat-hulls and lower prices prevailing, while under II*c*, "Minor produce," there was an increase of Rs. 1,189 owing to a larger amount being realized by selling the right to collect wood-oil.

The increase of Rs. 1,042 under V, "Miscellaneous," is due to a larger number of convictions resulting in fines, and the decrease of Rs. 346 under V*c* to less labour performed by the elephant establishment consequent on the loss of one animal a little before the close of the previous year.

Review of expenditure.

133. The increase in the expenditure under AI*a*, as compared with the previous year's figures, is entirely due to the larger out-turn of the Thoungyin forests and higher prices paid for it, the average rate of payment being Rs. 8-1-8 per log and Rs. 4-6-5 per piece, whereas during the former year it was Rs. 6-10-3 and Rs. 3 per log and piece respectively.

The decrease under AVI*b* is due to smaller purchases of paddy consequent on the smaller elephant establishment maintained during the year.

Financial results of sleeper operations.

134. The average cost per sleeper to the Department including, conversion, freight, and delivering at Calcutta, amounted during the year to Rs. 3-15-6½; and the average price realized at Calcutta being Rs. 4-8-0 per sleeper, there remains after deducting charges a profit of Rs. 0-5-5½ per sleeper, or Rs. 4-15-0 per ton.

The average cost is the same in the Salween division as in the South Tenasserim division, the higher rates paid for delivering at Moulmein being almost equal to the cost at Tavoy, plus the extra freight expended on the Tavoy sleepers for conveyance to Moulmein.

Owing to the difficulty experienced in obtaining contractors at reasonable rates for the transport of such heavy wood as pyinkado to Moulmein from the Salween forests, there is but little prospect of the sleeper business expanding there. The prospects are better at Tavoy, where an additional saw-mill has been lately erected, and whence contractors are more readily procurable for the extraction of heavy timber. While freights to Calcutta continue at Rs. 10 per ton, it will be profitable to keep up and enlarge sleeper operations, but with an increase to Rs. 15 per ton there will be no inducement to do so.

VI.—KADO TIMBER REVENUE DIVISION.

Receipts and expenditure of Kado Timber Revenue Department.

135. During the year the receipts and expenditure of the Kado Timber Revenue Department were Rs. 4,16,037-6-0 and Rs. 38,136-15-1 respectively, leaving a net surplus of Rs. 3,77,900-6-11.

The receipts and expenditure may be thus summarized:—

			Rs.	A.	P.
Receipts ...	Duty on British timber	...	2,547	6	0
	Do. on foreign do.	...	3,25,201	2	0
	Confiscated and drift timber	...	85,773	14	0
	Miscellaneous ...	...	2,515	0	0
	Total	...	4,16,037	6	0

			Rs.	A.	P.
Drift and confiscated timber ...		...	25,512	12	1
Live and dead stock ...	...	...	1,158	18	7
Buildings ..	...	...	851	10	11
Salaries ...	...	...	11,118	10	6
	Total	...	38,136	15	1

Receipts compared with those of previous year.

136. The receipts exhibit an increase, as compared with those of the previous year, of Rs. 1,31,842, and the expenditure an increase of Rs. 7,421-2-1. The increase in receipts will be explained by the following figures :—

	1879-80.	1880-81.
	Rs. A. P.	Rs. A. P.
Duty on British timber	2,036 4 0	2,547 6 0
Do. on foreign do.	2,32,692 14 0	3,25,201 2 0
Confiscated and drift timber ...	46,800 6 0	86,773 14 0
Miscellaneous	3,025 0 0	2,515 0 0
Total ...	2,84,544 8 0	4,16,037 6 0

The increase in duty is due to the higher prices of teak timber during the year, and the increase under drift and confiscated to the larger number of logs sold as well as to better prices for inferior timber.

Expenditure compared with that of previous year.

137. The disbursements of the two years are as follows under :—

	1879-80.	1880-81.
	Rs. A. P.	Rs. A. P.
A	19,668 3 7	27,018 4 7
B	11,047 9 5	11,118 10 6
Total ...	30,715 13 0	38,136 15 1

The increase under *A* is almost wholly due to the larger number of logs salved and the higher expenses incurred on the stranded and sunk timber in the Thoungyin river. The expenditure on buildings was also Rs. 268-0-11 in excess of that of the previous year; and more was also spent on stock.

CHAPTER V.

GENERAL.

Exports of teak timber from Moulmein.

138. The exports of teak timber from Moulmein during the year amounted to 1,15,936 tons, which is an increase of 18,521 tons over the exports of the previous year. Full details of the exports of teak to various ports will be found in Appendix D. This large increase is entirely due to the larger exportation for the Europe or Home market. The exports for the Calcutta and Bombay markets continued much the same as during the previous year. The following figures show the quantities exported during the last four years :—

	Tons.	Value. Rs.
1877-78	123,242	78,59,106
1878-79	103,207	61,32,445
1879-80	97,415½	60,84,834
1880-81	115,936	86,82,027

Exports from Moulmein of timber other than teak and minor forest produce.

139. The exports of timber of other kinds from Moulmein, as shown in Appendix D, amounted to 1,763 tons, valued at Rs. 74,308. Of minor forest produce from Moulmein the exports amounted to 577 tons, valued at Rs. 12,663.

Exports of timber other than teak and minor forest produce from Tavoy.

140. From Tavoy the export returns show 250 tons of timber (chiefly pyinkado sleepers), valued at Rs. 7,994-5-0, to have been shipped from thence, and minor forest produce amounting in value to Rs. 22,266-8-0.

The timber trade during the year.

141. The favourable condition of the timber trade which marked the close of the previous year continued throughout the year under review.

It will be seen from Appendix D that the exports of teak timber to the United Kingdom attained as high a figure as 42,234 tons, which is 19,937 tons in excess of the quantity exported during the previous year. This large import-

ation into the United Kingdom did not affect the prices of timber at Home as is usually the case, the year opening with prices varying from £12-10-0 to £14-10-0 per ton as shown in Appendix F and closing with prices varying from £13-10-0 to £14-10-0 per ton.

In Calcutta prices varied from Rs. 65 to Rs. 85 for I class timber and Rs. 50 to Rs. 65 for II class timber. The closing prices were Rs. 70 and Rs. 55 per ton respectively. Teak sleepers, of which 15,000 were shipped by private parties from Moulmein, were purchased by the East Indian Railway Company at Rs. 5-4-0 each, or Rs. 76 per ton.

The Bombay market opened with Rs. 74 per ton of I class quality and Rs. 62 for that of II quality. During the year prices fluctuated somewhat and rose as high as Rs. 83 for the first and Rs. 70 for the latter, but the closing prices were Rs. 72 and Rs. 66 respectively.

The demand in both the Bombay and Calcutta markets were steady, but not heavy, and owing to dealers in Moulmein being chiefly occupied with squaring timber for the Home market, these ports did not receive such large importations as usual. The 46,056 tons on hand at close of the previous year, together with the timber imported from beyond the frontier, *viz.*, 1,09,082 tons (although less than the importation of the previous year by 17,488 tons) sufficed for the requirements of the trade in Moulmein.

The prices for round timber, however, ran exceedingly high and became at times almost fancy prices. Several lots were disposed of at as high a price as Rs. 80 per log all round, and lots, a proportion of which only was likely to prove suitable for the Home market, did not sell at a lower figure than Rs. 50 to Rs. 55 per log all round.

The prices of inferior timber and of timber in lots containing only a few logs suitable for the Home market also rose but not to the same extent.

For squared teak timber the price at Moulmein was as high at times as Rs. 95 per ton for I class and Rs. 70 per ton for II class timber, but although prices for squared timber rose so considerably, yet for scantling and planking they remained almost unaltered.

Freights to Home ports for first class ships varied from £3-5-0 to £3-15-0 per ton. Freights by steamer to Bombay were Rs. 20 per ton of 50 cubic feet to Bombay and Rs. 5 per ton to Calcutta up to September, after which the British India Steam Navigation Company raised the rate to Rs. 10 per ton.

From information received, and considering the numerous traders who have gone up to the foreign forest, a fair out-turn may be expected next season, but prices for I class timber are not expected to fall to any extent.

Interchange of seeds, &c.

142. One small parcel of *amherstia* seed (*Amherstia nobilis*) was forwarded to Dr. King, Calcutta; and eight parcels of kyetpoung seed (*Chevanessia esculenta*) were supplied to the Director, Botanical Garden, Peradenya, Ceylon.

A small quantity of Sit seed (*Albizzia procera*) was supplied to Mr. J. E. Brown, Adelaide; and two parcels of Dahat seed (obtained from the Prome division) were respectively sent to Baron Von Muller in Melbourne and the Queensland Acclimatization Society, Brisbane.

One parcel of mahogany seed was received from the Botanical Gardens, Calcutta, about the close of the rains.

Elephants.

143. The only elephant establishment maintained in this circle is a small one for depôt purposes at Moulmein, the large number of elephants in the possession of private individuals in the forest districts precluding the necessity for maintaining a separate elephant establishment for carriage purposes. The health of the two elephants of the depôt establishment continued good throughout the year. In accordance with the orders of the local Government they were put upon a reduced allowance of paddy very gradually, the grass-fodder being at the same time increased, but finding the animals becoming out of condition Mr. Slym increased the allowance to one-half of what it had been before, *viz.*, to half basket daily to the large tusker and six byees to the female.

The only description of fodder which is procurable is grass from the banks of the main river. No branch-fodder is obtainable, except at great cost; and to the want of branch-fodder in addition to grass-fodder as well as to the heavy and continuous dragging work which the animals have to perform daily, must be attributed the fact of their not keeping in good condition. The keep and feed of these two animals, as shown in Appendix A, amounted to Rs. 61-5-3 on an average per mensem, which is a slight decrease as compared with the average of the previous year.

Carriage-elephants required.

144. An elephant establishment for carriage purposes would undoubtedly be of great service, as under the present system of hiring great delays are often experienced in obtaining elephants, although the forest contractors are under engagement to supply them from their work-people.

This last dry season the work of demarcation was greatly delayed in consequence of the unwillingness of the Thoungyin Karens to hire out their elephants. The same trouble was experienced by the Divisional Officer in the Ataran division, particularly after a hired elephant had been stolen from his camp in the Meeteegeik forest, and the only course open to the Department to adopt is to hire elephants for the whole working season at a lump sum per animal instead of hiring for limited periods at a certain daily rate.

The facilities for stealing and removing elephants beyond the frontier preclude the purchasing of these animals, except for use solely, at or near Moulmein.

Buildings.

145. Two small but substantial guard-houses were constructed at the Battery point Depôt, Moulmein, at a cost of Rs. 479-12-9, inclusive of cost of wood supplied by the Department. The Kado office, out-houses, and guard-houses were repaired at a cost, including material supplied, of Rs. 61-6-2.

Subordinate executive establishment.

146. In February one Moung Shway Thwin, of Tavoy, was appointed forest apprentice and posted to the Ataran division.

No changes in the subordinate forest establishment of the Ataran division have to be recorded beyond the appointment of an additional forest guard for the care of the Kyoon choung reserve and the dismissal of the forest guard of the Winyaw beat for not residing within his beat and for general inefficiency.

Consequent on the large area demarcated as State reserves in the East Salween division, sanction was obtained for the entertainment on the extra establishment of one forester, 3rd grade; one forester, 4th grade, and two foresters, 5th grade.

Early in the dry season the Divisional Officer succeeded in filling up two of these appointments for the charge of the Kamawkala and Mepalay beats, but towards the close of the year both individuals (intelligent Christian Karens) resigned.

Captain Bingham reports that there is a general disinclination everywhere to serve as forest guards. However, towards the close of the year one of the vacancies was again filled up.

Mr. Aplin experiences the same difficulty in the Ataran division, particularly in procuring good men who possess both intelligence and physical fitness for a forest life.

Organization of forest beats.

147. In the West Salween and Ataran divisions, in which the demarcation work is nearly completed, the forest rangers and beats are as follow:—

I.—WEST SALWEEN DIVISION.

(*a*) West Salween range; Upper Salween, Wamoo; Sinzweh, Kaheeloo, Beelin, and Donedamee beats.

II.—ATARAN DIVISION.

(*a*) Ataran range; East Zamee, Northern; East Zamee, Southern; Winyaw and Yea beats.

148. With the exception of the Conservator, who suffered somewhat in health on his return in September from Papoon and the West Salween division toungya plantations, the health of the superior establishment has been on the whole pretty good. Captain Bingham suffered occasionally from short attacks of fever; and Mr. Aplin was prostrated by fever a short while at the close of the year.

Health of superior and subordinate establishments.

Two of the Ataran forest guards are reported as having been incapacitated by illness from performing their duties satisfactorily.

In the East Salween division Forest-ranger Shway Oung and Forester Moung Thee suffered slightly from fever, and some of the temporary forest establishment suffered severely; otherwise the health of the subordinate establishment has been good.

149. No changes occurred in the strength or *personnel* of the controlling establishment, which comprises, besides the Conservator, one Deputy Conservator, 1st grade, one Deputy Conservator, 3rd grade, one Assistant Conservator, 2nd grade, and two Assistant Conservators 3rd grade.

Changes in the controlling establishment.

The Conservator was absent on privilege leave from the 29th April to the 3rd June, during which period the charge of the Tenasserim circle devolved upon Mr. Ribbentrop, Conservator of the Pegu circle.

Captain Bingham, Deputy Conservator, 3rd grade, was absent on privilege leave from the 22nd May to the 19th August.

150. During the year the several Divisional Officers were appointed assistants in forest matters to the Civil Officers in charge of their respective districts in accordance with the order of the local Government contained in No. 5G. of the 18th January 1881.

Relations between Forest Officers and Civil Officers.

151. In April the Conservator accompanied the Inspector-General to Rangoon, and was detained there on duty in connection with the draft Forest Bill and other matters from the 10th to the 28th April.

Tours of the Conservator.

From the 25th June to the 3rd July the Conservator was again in Rangoon on duty in connection with the submission of the annual reports of the two circles; and was absent on inspection duty to Tavoy and Mergui from the 15th to the 22nd July.

On the 25th August the Conservator proceeded up the Salween and Yoonzalin rivers, and examined the teak plantations in the Sinzweh reserve between the 3rd and 7th September. Papoon was reached on the 9th September, whence the Conservator proceeded to examine the plantations in the Beelin, Mehwaing, and Mehnanweh reserves, returning to Papoon on the 18th September.

Proceeding down the Yoonzalin on the 21st September, the Conservator examined the plantations in the Kahecloo reserve on the 23rd and 24th, and returned to Moulmein on the 25th September.

The Conservator was on duty at Rangoon in connection with the half-yearly examination in Burmese from the 6th to the 11th November; and absent on tour of inspection to Tavoy and Mergui from the 25th November to the 2nd December.

On the 16th December the Conservator proceeded *viâ* Kyaen on the Houndraw river and Kawkareik to Myaywadee, arriving there on the 22nd December. Proceeding thence on the 24th December the Conservator visited Kyoukket and Maygala reserves, and selected the boundaries of the proposed Onekraing and Gawlee reserves at the sources of the Thoungyin river and proposed Balaydo reserves in the Middle Thoungyin district, returning thence to Myaywadee by the 12th January. Thence the Conservator returned *viâ* Kawkareik to Moulmein by the 19th January. Between the 11th and 19th February the forests on the Martaban range were examined by the Conservator in connection with the selection of a reserve in that locality; and between the 25th February and 5th March the Conservator visited, in company with Mr. Pratt Barlow, the bamboo forests in the Yoonzalin valley as far north as the Sinzweh reserve.

On the 25th March the Conservator proceeded again to Tavoy and Mergui, and landing on his return from the latter place at Thayet choung village in the lower part of the Tavoy river, on the 29th March proceeded to the south-east and examined the thingan forests on the Mintha stream, a tributary of the Toungbyouk river, as well as the obstructions in the former stream. Returning to Tavoy by the 8th April, the Conservator proceeded to Moulmein on the 12th and arrived there the day following.

Services of officers.

152. The Conservator has reason to be satisfied with the manner in which Divisional and other officers have all performed their various duties.

During his absence from head-quarters the current duties of the office were carried on in a very satisfactory manner by Mr. Slym, Deputy Conservator of the Salween division proper.

W. J. SEATON, MAJOR,

Conservator of Forests, Tenasserim Circle.

REPORT

ON

THE FOREST ADMINISTRATION

OF

BRITISH BURMA

For the year 1880-18

BY

B. Ribbentrop, Esq., Conservator of Forests.

PEGU CIRCLE.

CHAPTER I.

SUMMARY.

1.—Area and Boundaries.

Area of State reserves and boundaries.

THE local Government finally sanctioned during the year the formation of 486 square miles of State reserves, exclusively of a Karen area of 78·5 square miles, 15 square miles of State reserve were abandoned, bringing the area of State reserves in Burma up to 1900·5 square miles, including 248·5 square miles of Karen areas. The final demarcation of the boundaries of the newly-sanctioned areas has been almost completed.

Final proposals for reservation

2. The following large areas have been examined by specially deputed Demarcation Officers, and only await the local Government's final sanction :—

The Prome-Nawin forests, 143 square miles, including 43 square miles of Karen area.			
Saingdo forest ...	2	,,	
Thabala ...	9	,,	
Mindone Yoma ...	100	,,	
Hlwa Yoma ...	100	,,	
Ngawet ...	5	,,	
Upper Zamayee ...	219	,,	including 88½ square miles of Karen area.
Lower do. ...	175	,,	do. 18½ do do.
Lower Thaing forest	101	,,	
Kyoukmasin ...	82	,,	
Total ...	886 square miles.		

Preliminary examination of forest areas.

3. Areas of considerable extent, situated in the Sittang, Tharrawaddy, and Prome divisions, have been inspected by Forest Officers, and preliminary proposals regarding their reservation have been submitted.

Petitions against previous forest settlements.

4. Several petitions were presented during the year against previous forest settlements, and enquiries were instituted in each case, which showed that the work in every instance of the different Demarcation Officers had been conducted with care and consideration and required no revision. The compensation given to the villagers near the Nawin reserve was not paid for any losses they had sustained by a grasping demarcation, but to remove them out of the heart of a rich teak-producing area.

Cost of demarcation of State reserves.

5. The cost of demarcation during the year amounted to Rs. 16,826, but this consists to a great extent in the pay and allowances of three Civil Officers on special duty.

2.—Protection and Improvement.

Fire-protection unsuccessful.

6. The dry weather began very early, springs and streams were dried up, and vegetation withered much earlier than usual; and as the rains set in very late, the account of our fire-protection must chronicle disaster after disaster.

Out of a total area of 56,378 acres under fire-protection, fire was only kept out of 40,818 acres at acost of Rs. 9,043. The main disasters occurred in the Tharrawaddy division in the Bwet and Beelin reserve. The former was choked with dead bamboos which had flowered last year, and it was quite impossible to stop the fire with the means at our disposal. The toungyas will to a great extent recover, but there is but little hope that much of the dibbling which was very successful in many places will survive the effects of the fire, which was extremely fierce. The damage done will as much as possible be repaired by extensive dibbling, which ought to succeed well.

Teak cultivation burnt, though not all destroyed.

7. The fires in the Mokeka Beelin reserve, though the greater part burnt was only protected for one year, are serious disasters, as they include 95 acres of teak toungyas and 400 acres of dibbling. The toungyas doubtlessly will recover to a great extent, and as the dibbling was older than in the Bwet reserve and the fire less severe, it is not anticipated that they will have suffered to the same degree, and most of the seeding will throw out new shoots. The total amount of teak cultivation destroyed or damaged is serious, but in many cases the damage is not irrepairable; thus 40 acres of teak plantation were burnt through by a light ground-fire and no harm was done, and the fire ran through 430·93 acres of teak toungya, in most of which the taller trees have undamaged terminal shoots and are not much the worse for it. Only in the cases of dibbling the fire has been throughly destructive as far as is known at present.

Fires did not cross the fire-lines.

8. It cannot be said that these fires, which only in one or two minor cases crossed the fire-trace, were due to any want of precaution or watchfulness. On the contrary, the forest subordinates were always to the fore and did their best to extinguish the fires with all means at their disposal. It is impossible to prevent the lighting of fires within a large forest by any amount of watchfulness and care. And the only means are to make the whole of the surrounding villages directly interested in the protection. If it was published by the civil authorities that in case of a fire within a reserve which cannot be brought home to an individual all gun licenses would be cancelled in all villages within five miles of the reserve and that no other gun license would be valid within that area, it would do much to put down the danger of forest fires. We can prevent the fire entering our reserves from the outside, but the danger which we cannot guard against consists in hunters and lizard-catchers firing patches of grass, in honey-collectors smoking out bees, in the careless use of fire by Shan traders and travellers, and in malicious firing.

Regular teak plantation.

9. One hundred and forty-nine acres were planted up at Magayee with a mixure of teak and padouk. The area is completely stocked at a cost of Rs. 12,230.

Teak toungyas.

10. Teak toungyas are still limited to the Prome and Tharrawaddy divisions. In the former 132 acres were stocked with 243 trees per acre, and in the latter 340 acres with 2,85,385, or an average of 839 plants per acre. This is eminently satisfactory, and the result would have been better still if the Karens had not been greatly disturbed by cholera in the very beginning of the planting season. The total cost of teak toungya cultivation amounts to Rs. 3,056-8-0.

Toungyas cleared.

11. The toungyas of the two previous years have been cleared, and in the older plantations, the Mahcoolettanshay (*Sacrocephalus cordator*) has been thinned out. This is the most irrepressible tree, which has to be cut back for some years in almost all teak toungyas. The cost of clearing and thinning out teak toungyas amounted to Rs. 1,457-1-4.

12. The cultivation of mahogany is not as yet a success. The seed sent out is not good, and in spite of the greatest care does not germinate. The young plant once established is strong enough and sends out new terminal shoots as soon as they are nipped off by insects, which seem to favour young mahogany particularly.

Mahogany.

13. It has been demonstrated that vanilla will grow, flower, and bear pods at Magayee. It had however been planted on standing trees, and the fertilizing process on a shaky bamboo ladder some 30 feet above ground is dangerous. In future it will be grown on an avenue of pyinkado posts covered by lattice-work.

Vanilla.

14. Coffee succeeds admirably at Thandoung, and may, if older plants are put out, grow at Pyoon choung; but the successful cultivation of tea is still problematical at Thandoung and in the Pyoon choung. The hot weather kills both tea and cinchona.

Coffee and tea.

15. Even at Thandoung cinchona does not flourish, and a long hot weather always kills many, even of the older plants. Cinchona cultivation, with irrigation during the hot weather, has not been tried as yet, but ought doubtlessly to succeed.

Cinchona.

16. Most prosecutions for breaches of forest rules resulted in convictions.

Breaches of forest rules.

17. The roads in the Kangyee and Magayee reserves were improved, and the obstructions in the feeders of Mimboo and Bobin were blasted.

Communications.

3.—Yield and Working.

18. During the year 12,589 logs of teak, containing 11,564 tons, were extracted by Government contractors at a cost of Rs. 1,33,781-11-6, or at an average cost of Rs. 11-9-1 per ton. In addition to this 677 logs, containing 282 tons, were worked out by purchasers, and also 8,179 teak standing in paddy-fields, the tonnage being estimated at 1,500 tons. The total out-turn of teak from all sources was therefore 13,687 tons.

Extraction of teak.

19. During the year 2,042 logs, containing 1,633 tons of timber of reserved kinds other than teak, were worked out by Government contractors at a cost of Rs. 14,842, or an average of Rs. 9-1-5 per ton. One thousand nine hundred and twenty-one logs were removed by purchasers and 14,229 logs were extracted under trade permits. Free permits were also issued for 67,674 trees.

Extraction of timber of the reserved kinds.

20. It has been estimated that 436,500 cutch trees have been felled and consumed under cutch permits which were issued for 7,275 cauldrons, and that 6,720 trees were utilized under charcoal permits. Twenty-three toukkyan logs and 631,400 bamboos were sold from Government reserves.

Cutch trees consumed in manufacturing of cutch.

21. It is impossible to estimate the number of unreserved trees, bamboos, and other forest produce extracted from the unreserved forests. It may be mentioned however that 21,957 logs, 2,842,322 bamboos, 6,670 bundles of shaw fibre, and 748,285 bundles of thatching passed the three revenue-stations in the Rangoon division.

No estimate can be formed regarding extraction of unreserved woods.

22. The balance of drift at the beginning of the year was 504 logs. During the year 7,499 logs of teak drift timber and 136 logs of timber of other kinds were salved departmentally; of these, 6,435 logs were made over to claimants, 4 logs were lost, 840 logs were sold, 7 used departmentally, and 853 logs were still under notice at the end of the year.

Drift timber.

23. One thousand and one logs of teak timber, containing 571 tons, have been disposed of locally. The balance was sent to the central depôt at Rangoon, where 11,037 logs, containing 10,066 tons, were received during the year, against 20,186 logs, containing 18,344 tons, during the previous year. One

Local disposals and despatch of timber.

thousand five hundred and sixty-four logs of timber of other kinds were also disposed of locally, and 505 logs, containing 569 tons, of such timber were received at the depot.

Disposals in Central depot.

24. The disposals in the Central Depôt during the year amounted to 18,302 logs of teak, containing 16,613 tons, 595 logs, and 1,354 scantlings and sleepers of trees of other kinds, containing 671 tons, leaving a balance of 6,273 tons of teak in the Central depôt which is 6,149 tons less than last year's balance.

The average prices per ton realized at the Central depôt were—

	Rs.	Per ton. A.	P.
Teak—			
Mast-pieces	40	10	0
Yard pieces	44	0	2
Doogies, I class	47	6	4
Do., II ,, ...	36	11	6
Loozars	38	12	10
Yathits	28	6	2

showing a large increase in the price of II class timber.

For timber of other kinds the following average prices were realized per ton :—

	Rs.	A.	P.
Thitka	24	18	2
Padouk	44	8	6
Kanyin	26	0	0
Thitya	34	7	3

Neaped timber.

25. Some 6,000 logs, of teak have been neaped in Prome, Tharrawaddy, and Toungoo divisions.

Girdling.

26. During the year 21,496 teak trees and 1,516 pyinma trees were girdled: these include however 4,874 teak trees girdled in April 1880, which have already been treated of in a special girdling report of the 20th September 1880. The figures in last year's report, paragraph 33, Appendix A, as girdled during the year include by mistake some girdlings made in April. The total girdled for the year should have been 16,685.

4.—Financial Results.

Receipts and expenditure.

27. The receipts and expenditure of the year, as exhibited in form No. 49, were as follows :—

	Rs.	Rs
Receipts	8,66,552	
Expenditure	4,41,977	
Showing a surplus of ..	4,24,575	

During the previous year in this circle—

The receipts amounted to	6,52,069	
The expenditure amounted to	5,23,998	
Leaving a balance of ...	1,28,071	

The figures thus show—

Increase in gross revenue of		2,14,483
In net revenue of		2,96,504

Comparison of revenue.

28. Revenue I*a* exhibits an increase of Rs. 1,56,046 as compared with 1879-80. The number of logs sold was 1,630 in excess of previous year. This would account for about Rs. 60,000 difference in the surplus; the balance in favour must therefore be attributed to the high average rates obtained at the Central timber depôt, Rangoon.

Revenue II*a* shows an increase of Rs. 18,899, almost entirely obtained from the Tharrawaddy division by sale of teak trees in paddy-fields and cutch in reserves. There is also an increase exhibited in the Prome division of Rs. 2,666; while there is a slight falling-off in the Western and Toungoo divisions. Under

II*b* there is a falling-off of Rs. 1,052 in the Rangoon, Tharrawaddy, Western, and Shwaygyin divisions. II*c* and II*d* show slight increase of Rs. 878 and Rs. 55 respectively. Under II*e* a large increase of Rs. 37,702 is exhibited, being chiefly due to the increased demand for cutch-boiling permits. The increase is most marked in the Tharrawaddy and Prome divisions, each being over Rs. 7,000 in excess of previous year.

Revenue III shows a slight decrease of Rs. 387 as compared with last year's, while the number of logs salved was less by 1,628.

There has been an increase in the Agency, Rangoon, Tharrawaddy Prome, and Shwaygyin divisions; while there has been a large falling-off in the Toungoo division of over Rs. 12,000, compensated however by an increased collection of over Rs. 9,000 in the Shwaygyin division.

Under V, "Miscellaneous," *a* exhibits a slight increase of Rs. 151, *b* exhibits a decrease of Rs. 1,316, and *c* shows an increase of Rs. 3,506, mainly due to increased collections at the Central depôt on launching-hire and in other divisions to rent of buildings and hire of elephants credited by Forest Officers.

Comparison of expenditure.

29. Expenditure AI*a* shows a decrease of Rs. 68,605. This is accounted for by a falling-off in the out-turn of the Prome and Toungoo divisions as compared with last year of over 5,000 logs. When the regular estimate of the year was framed it was known that there would be a falling-off, and the total under AI*a* was reduced, but the actual results, owing to some 6,000 logs having been neaped, has shown a still further reduction on this estimate.

AI*b* and *c* show a reduction of Rs. 15 and Rs. 240 respectively, and call for no remark.

AII shows an increase of Rs. 1,074 owing to charges on the half-profit principle being debited to this head in the Rangoon division.

AIII shows a decrease of Rs. 1,432 as compared with last year, due to a slight decrease in cost of working, the receipts being nearly the same for both years.

AVI*a* shows that the entire amount budgetted for was saved, no animals having been purchased during the year; but two animals required for Arakan were supplied by the Khedda Offices, Dacca.

AVI*b* shows a saving of Rs. 2,321, the issue of grain having been discontinued for all carriage-elephants.

AVI*c* shows a decrease of Rs. 1,602 owing to short indents on the Agency division and a saving of over Rs. 600 in the Rangoon division as compared with last year.

Under AVII*a* there is a slight decrease of Rs. 11 under (*b*) of Rs. 19,131. This large reduction is owing to the non-construction of I and II class bungalows originally budgetted for but not carried out, as no suitable sites were selected.

Under VII*c* there is a slight decrease of Rs. 16 only.

AVIII *a.*—*f.*—All show an increase (except *e*), amounting in the aggregate to Rs. 11,934, of which AVIII*a* shows Rs. 7,994. This is owing to demarcation having been carried on simultaneously in the Thayetmyo, Rangoon, and Toungoo districts during the dry season of 1880-81, and under plantations an increase of Rs. 2,417, chiefly in Rangoon and Tharrawaddy.

Under *c* there is a slight decrease of Rs. 178, which calls for no remark.

AIX*a* shows an increase of Rs. 661, being chiefly sums written back in the Prome and Agency divisions and debited to this head, (*b*) shows a decrease of Rs. 111 in law charges, and (*c*) an increase of Rs. 1,148, being sums written-off to profit and loss in the Rangoon and Prome and Agency divisions.

Under BI, "Establishments," there is an increase of Rs. 6,317 under superior officers and of Rs. 451 and Rs. 1,959 under *c* and *d* respectively, accounted for in the former by the usual annual promotions and in the latter to working up more fully to the fixed scale.

Under BII, "Travelling allowances," there is on the whole an increase of Rs. 1,166, chiefly under superior officers', an additional division, Arakan, being added to the former list.

Under BIII, "Contingencies," *a* to *f*, an increase of Rs. 820, this being chiefly under *c*, rents, rates, and taxes.

CHAPTER II.

RESERVED FORESTS.

I.—PROME DIVISION.

Abandonment of Bangone and Thabyeela State reserves.

30. The sanction of the Government of India was obtained to the abandonment of the Bangone and Thabyeela State reserves, aggregating 15 square miles, as they contained several villages and permanent cultivation. They were formally abandoned in *British Burma Gazette* Revenue notification No. 44.

Proposed reserves pending sanction.

31. The reservation of the Nawin forests and those on the Mindone and Hlwa Yoma, Saingdo, Thabala, and Ngawet still waits sanction. Sanction for the Nawin State reserve was withheld by the Chief Commissioner pending further enquiries mainly with regard to the claims of the villages of Kopaingwoon, Myaygya, and Nyoungwoon, and the effect of reservation on the east of the Yoma on Karen settlements on the west side thereof. The villages of Kopaingwoon and Myaygya, situated in a rich teak locality, were bought out of their holdings with an outlay of Rs. 1,500, and some 3 to 4 square miles were added to the original proposal instead of abandoning any of the rich teak forests which almost surrounded their toungyas. The claims of the village of Nyoungwoon refer to two reserves, the Loothay and Loopoung State reserves, sanctioned as far back as 1874, and as the enquiries with regard to the Karen settlements have been satisfactory, an early sanction of this important State reserve is hopefully expected. The reservation of the above-named forests in the Mindone township has also been approved of by the Deputy Commissioner of the district and the Commissioner.

Petitions against existing reserves.

32. The householders of the Ngaloosan village petitioned that as some of their yas had been taken up in forming the Ngaloosan reserve they had no means of livelihood. Rs. 250 were awarded to them to enable them to remove. On receipt of this compensation however they elected to remain where they were and to work for the Forest Department.

The villages near the Thayetmyo East Yoma sanctioned during the previous year petitioned the Chief Commissioner to be permitted to cut toungyas within the reserve. The Assistant Commissioner, Allanmyo, and the Deputy Conservator of Forests were deputed to investigate the case, and, as far as I know, have come to the conclusion that it is quite unnecessary to re-open any portion of the reserve at present.

Teak toungyas.

33. The villagers of Kadinngazin, Ngaloosan, and Ayodaw, living on the very borders of the Choungzouk reserve, cultivated teak toungyas within the fire-traced area to the extent of 132 acres. The result is not as yet quite satisfactory, as the area contains only 31,900 plants on an average of 242 per acre. The cost, exclusive of taxes, which have as yet been withheld on account of the small number of plants in some of the yas, amounts to Rs. 319, and an otherwise useless bamboo-jungle could not be improved in a cheaper way. Only 78 acres have been selected for teak toungya cultivation during the present season.

Clearing of last year's toungyas.

34. The teak toungyas of 1879 in the Choungzouk, 67 acres in extent, were twice cleared during the year at a cost of Rs. 453-8-0, or nearly Rs. 7 per acre. This is by far too much, and must be reduced by weeding only round the plants and not over the whole area.

Mahogany and *Pithecolobium*.

35. Of the 12 mahogany seedlings planted in the Prome teak plantation 10 are flourishing; two planted out near the elephant-shed are also doing well. Of the 41 mahogany seedlings raised at Kadinngazin which were put out in a toungya, the Divisional Officer's report only mentions 33. Only eight seedlings were raised out of the two supplies of mahogany seed received during the year, though the seed received all possible attention, and was sown in accordance with the instructions accompanying the supplies of seed.

36. Several *Eucalyptus* were raised and some of last year's transplanted. It is however a hopeless task. Not one of the species experimented upon can stand the moist climate, and rarely survives the third year.

Eucalyptus.

37. The Prome plantation, protected at a cost of Rs. 24, caught fire twice,—once on the 28th April, and again on the 30th April. In neither case had the fire crossed the fire-paths, and had therefore originated within the plantation either from malice or accident. The fires were slight ground-fires and did no harm.

Fire-protection in Prome plantation.

The protection of the Choungzouk reserve has been successful. A small fire occured at the burning of a teak toungya, but was at once extinguished. The area protected amounts to—

Choungzouk	...	...	...	...	...	...	8,160
Ngaloosan	...	...	...	...	...	...	182
Ngatooaing	...	...	...	...	...	...	11
Myoungmyittoung	...	...	...	...	...	...	9
					Total	...	8,362

The cost of the fire-protection amounts to Rs. 937-2-0. Last year 2,600 acres were protected for Rs. 349-8-0. The increase in the expenditure is due to a larger number of internal fire-lines, increase in area, &c., but still in the absence of further explanation, which has been called for, is out of proportion. Of the expenditure, Rs. 675 have been charged in the accounts of the year under review.

38. In the Satsoowa and Thayetmyo East Yoma reserves 214 cutch trees were felled by several cutch-boilers. These men produced however permits granted by the Assistant Commissioner, Allanmyo, containing the words "inside forest reserves." They could not therefore be prosecuted, but the timber was sold to a third party for Re. 1-8-0 per tree. Another case of felling cutch within State reserves was tried by the Deputy Commissioner of Thayetmyo, who convicted the accused and fined three of the offenders eight annas each and a fourth one rupee.

Breaches of forest rules.

II.—THARRAWADDY DIVISION.

39. The area of forest reserves remains unaltered; but the Tayokemaw forests, situated between the headwaters of the Hlaing and the Irrawaddy, have been examined by a Forest Officer and preliminary proposals have been submitted.

Area of reserves unaltered.

40. The Karens on the Sinzweh stream in the Toungnyo State reserve petitioned the Chief Commissioner with regard to the insufficiency of their toungya allottments. A survey was made of the area, and a careful enquiry showed that the area was large enough for all requirements.

Petitions against old reserve settlements.

41. In the Bwet reserve 13 men cut and burned 19 acres, but, owing to illness, two of them were unable to plant up the area. This was however done by the reserve forest guard. After the removal of the crops 17,900 seedlings were counted on the area, or an average of 942 per acre. The cost of the cultivation was Rs. 146-11-0, or Rs. 7-11-6 per acre.

Teak toungya in Bwet.

42. In the Nyanleh reserve 10 men cleared and burned and planted acres 28-5-0. The area is stocked with a sufficiency of strong healthy plants, and the countings showed 13,678 seedlings, or 488 per acre. The cost amounted to Rs. 301-5-0, or Rs. 10-10-3 per acre.

Nyanleh.

43. In the Gwaydouksan reserve five men planted up an area of acres 15-3-0, and the countings showed 20,374 seedlings, or 1,358 per acre, which is equal to the very best regular plantation. The total cost amounts to Rs. 199-13-0, or Rs. 13-5-0 per acre.

Gwaydouksan.

44. In the Bobin reserve an area of acres 27-8-0 was planted by 12 men, and the countings in the beginning of the cold season gave 32,340 plants, or 1,198 seedlings per

Bobin Choungwa.

acre. The amount paid for these plantations was Rs. 312-15-0, or Rs. 11-8-10 per acre.

Kangyee.

45. The toungya plantations in the Kangyee reserve made by 26 villagers amount to acres 57-14-0; and 36,977 seedlings were counted, or 637 per acre; and the total cost was Rs. 384-11-0, or Rs. 6-10-4 per acre. At the commencement of the rains these yas were as well stocked as those in Bobin, but many seedlings were destroyed by floods.

Mokeka Beelin.

46. In the Mokeka Beelin reserve on the Shoukpin stream the Karens of Oung Bway teh burnt and planted up acres 37-8-0; on this area 35,837 seedlings were counted, or 968 plants per acre. The amount paid for these plants was Rs. 354, or Rs. 9-7-0 per acre.

The Karens of Panlay and Shwaygya tehs cut and burnt an area of acres 136-3-0, but an epidemic broke out amongst the hill-people, which scattered them for a time; in consequence only 90 acres were cultivated. They contain 90,900 seedlings, or 668 per acre. The cost amounts to Rs. 909, or Rs. 6-10-11 per acre.

Koon Beelin reserve.

47. Eighteen men of Todee teh had felled and burned an area of acres 95-2-0, but by the time they had planted up 65 acres sickness scattered them, and they left the rest of their yas uncultivated: 37,398 plants, or 393 per acre, were counted in the area planted; and payments were made to the amount of Rs. 362, or Rs. 3-12-0 per acre.

Total teak toungyas.

48. The total area cultivated in the Tharrawaddy division amounts to about 340 acres, with 285,385 seedlings, costing Rs. 2,970-7-0, or Rs. 8-11-9 per acre.

Weeding and thinning.

49. Two hundred and sixty-four acres of teak toungyas of the two previous years have been weeded and cleared at a cost of Rs. 910-71, or Rs. 3-7-2 per acre.

Mahogany.

50. None of the mahogany seed received during the year germinated.

Fire-protection in Nyanleh.

51. In Nyanleh while the kaing-grass outside the reserve was being burnt the wind carried the fire across the trace in four places. All fires were however at once extinguished, and only 25 acres were burnt, including neither teak toungyas nor dibbling. A more serious fire took place on the 8th March; it sprung up near the deserted village of Thayetkyoung, was discovered at once, and the villagers of Myoda were called out for help. They assisted willingly, but, owing to a large quantity of flowered bamboos in the part of the reserve, an area which the forest-ranger estimates at 200 acres was burnt before the fire could be extinguished.

Twenty acres of teak dibbling burnt.

52. The area burnt includes about 20 acres of teak dibbling. The fire originated inside the reserve, and it is supposed was caused by cutch-boilers, many of whom encamped in the vicinity of the reserve, hunting lizards within the fire-traced area. The cost of the Nyanleh fire-protection amounts to Rs. 987.

Bobin, Myodwin, and Gwaydouksan.

53. The Bobin, Myodwin, and Gwaydouksan reserves have been successfully protected from fire at a cost of Rs. 225, Rs. 43, and Rs. 83 respectively.

Kangyee.

54. In the Kangyee reserve three fires occurred. The first took place while the trace was being burnt. The fire crossed unobserved along a fallen tree and 23½ acres were burnt, including a small patch of teak dibbling and 10 mahogany plants. The second fire originated inside the reserve on the Shwaybala footpath, and is supposed to have been caused by travellers smoking.

Three and three-fourth acres of teak toungyas burnt

55. Eleven acres were burnt, including 3¾ acres of teak toungyas of 1878.

Five acres of teak dibbling burnt.

56. The third fire also began inside the reserve, and is said to have been caused by people gathering cheroot-leaves. The area burnt is about 200 acres, and includes about 5 acres of teak dibbling. This part of the reserve is otherwise of little value, contains but

little teak, is annually flooded, and is covered to a great extent by kaing-grass, which rendered the extinguishing of the fire extremely difficult. The teak in the toungyas is but little injured, the seedlings in the dibbling are burnt down, but already send out fresh shoots; the mahogany however are killed.

Bwet.

57. The Bwet reserve, with the exception of about 300 acres, has burnt through. Two fires occurred. The first, on the night of the 22nd March, burnt through about 200 acres before it could be extinguished. The fire began within the reserve and away from any footpath, and was probably kindled with malicious intent. Suspicion points to some cartmen, who had that morning come up from the plains to cut bamboos in the reserve, but who were prevented by the forester in charge. The second fire was discovered on the morning of the 8th April, and as the bamboos throughout the reserve had flowered last year, covering the whole of the area with dead and fallen stumps, the fire raged till the 10th morning, passing through all of the teak toungya plantations and nearly the whole of the dibbling. It is impossible as yet to ascertain the amount of damage done, but the fire was extremely fierce and destructive. The origin of the fire is unknown; but it commenced near the Kyoukmyoung, a tributary of the Bwet stream, far away from any road or pathway. There is no reason to suppose that the forest was lighted maliciously; but the fire-protected reserves are during the hot weather the resort of all the game in the neighbourhood, and it is an old Burmese custom to light a forest to drive the game out; and it is generally believed that in the present instance the reserve was fired by hunters from the villages in the vicinity. Neither of the fires crossed the fire-trace in any place.

Detached toungyas.

58. Fire was successfully kept out of 38 acres of teak toungyas on the Shoukpin stream in the Mokeka forest. In the area of 238 acres of detached teak toungya in the Minla and Myoung forests two fires occurred, burning through 32 acres of toungya of 1875 on the Tehmyoke stream. Both fires were due to negligence of the persons in charge.

Mokeka Beelin.

59. Four large fires occurred in the Mokeka Beelin reserve. The first took place on the 14th March, and was due to carelessness on the part of Sawkeh Thaman Oo's men, who, when burning the fire-trace, allowed the fire to slip out of their control: 230 acres were burnt before the fire could be extinguished; but they contained no teak cultivation, and were only protected for one year. The second fire broke out on the 4th April in the middle of the reserve and far away from any path. There is no evidence to show how it arose, but it is supposed to have been incendiary to spite the fire-trace contractor, who is said to have had some quarrel with other Karens. Three thousand five hundred and twenty acres were burnt. The greater portion of this area had only been protected for one year; but the previous protected area included Shway Gya's teak toungya plantations of 1873, 1874, 1875, 1876, and 1877, amounting to 80 acres, and Sawkeh Panlay's teak toungyas of 1877, 15 acres, as well as about 60 acres of teak dibbling of 1876. The teak in these areas has of course not been destroyed, but still the disaster is very serious.

Ninety-five acres of toungya and 60 acres of dibbling burnt.

The third fire occurred 10 days later. Suspicion rests on five Burmans and a Shan trader. These men started from Yaytho at three in the afternoon to cross the Yoma. At daybreak the next morning five Shans left by the same road, and arriving at the mouth of the Thakanboo stream found the whole forest in a blaze. About 6,600 acres were burnt before the fire was put out. This area had only been protected for one year, and as it contained no cultivation the damage done is not very serious. The fourth fire took place on the 3rd May. The forest was fired at two places simultaneously by persons collecting honey, who are however still unknown. They killed the bees by fire and then left the burning trees in the forest. The area burnt is about 1,760 acres, and contained, which is a matter of great regret, 400 acres of successful dibbling.

Four hundred acres of dibbling burnt

In how far this cultivation has been damaged can only be ascertained after the rains. The forest, especially in this portion, is so full of dead bamboos that

the fire could be extinguished only with the greatest difficulty and danger. The cost of the year's fire-protection amounted to Rs. 1,015.

Thonezeh.

60. In the Thonezeh forest 2,180 acres were successfully protected at a cost of Rs. 120.

Total Tharrawaddy division.

61. It was attempted to protect 39·917 acres, but fire was only kept out of 24·507 acres.

Roads.

62. The cart-road through the Bwet reserve was cleared of fallen bamboos and otherwise improved at a cost of Rs. 189-8-0. The levelling and straightening of the main road through the Kangyee reserve was continued, the work costing Rs. 96-8-3.

Blasting.

63. Mr. deCosta has been employed in opening out the rocky obstructions in the feeders of the Bobin and Mimboo. The total work cost Rs. 526-0-9 and 182lbs. of powder have been used. Mr. deCosta has done good work, but his own measurements of the rocks removed are too extravagant for record.

III.—RANGOON FOREST DIVISION.

Okekan and Hlaing Yoma reserves sanctioned.

64. During the year sanction has been obtained to the reservation of the Okekan State reserve, containing 125 square miles, inclusive of a Karen area of 13 square miles, and for the Hlaing Yoma State reserve, containing 93 square miles.

Definite proposals for reservation.

65. The forests on the Lower and Upper Zamayee have been examined by Captain Jenkins and Mr. Carter, and definite proposals have been submitted for the reservation of two forests tracts, the Upper and Lower Zamayee reserve, containing 130½ and 156½ square miles respectively, exclusive of Karen areas of 88½ and 18½ square miles. The cost of this settlement amounts to Rs. 4,413-12-3, of which Rs. 2,676-0-3 have been charged during the year.

Demarcation.

66. The permanent demarcation of the boundaries of the Okekan and Hlaing Yoma State reserve has not as yet been completed owing to the resignation of the surveyor who was in charge of the work. The cost of permanent demarcation during the year amounted to Rs. 952-13-11.

Preliminary examination.

67. The forests on the Pounglin have been examined during the year by Mr. Pickard; and preliminary proposals have been submitted recommending the creation of an extensive reserve.

Teak plantation of 149 acres

68. During the year an area of 149 acres was planted at Magayee with padouk and teak in the proportion of 1 to 14 This cultivation cost Rs. 12,230, and the result is thoroughly satisfactory.

Evergreen belt and *ficus*.

69. The trees in the evergreen belt mentioned last year are healthy and growing, as well as 14 plants of the *Ficus elastica* which were put out in the open on mounds; but those left under the shade have all died during the year.

Mahogany.

70. Forty-seven mahogany plants are now growing at Magayee, of which 15 are two and three years old and have attained a height of from 4 to 6 feet, and 32 one-year old plants of 1 to 1½ feet height.

Vanilla.

71. The vanilla cultivation is quietly extending; the old plants, 14 in number, are 30 to 35 feet in height and have yielded five ripe pods during the year; in addition 34 cuttings were put out, of which 27 have taken root and are now 3 to 5 feet high.

Pithecolobium saman.

72. The soil at Magayee is evidently not suitable to the growth of *Pithecolobium saman*, 94 two-year old plants having died during the hot season. The seedlings also look far from well, but, what is remarkable, pick up and flourish as soon as they are taken away from Magayee.

73. The Magayee reserve, including all plantations, was successfully protected at a cost of Rs. 1,715-5-2, of which Rs. 1,258-3-7 were charged during the year. Rs. 684-2-0 were disbursed on account of the previous season. A fire broke out near the road between the plantations of 1871-72, but was at once extinguished without doing any damage whatsoever. The fire was lighted by a young Bengali throwing his cigar away. He was caught and fined Rs. 30, or six weeks' imprisonment in default.

Fire-protection in Magayee.

74. The Kyetpyoogan plantation was protected successfully at an outlay of Rs. 1,096, of which Rs. 909-12-9 were charged during the year. Rs. 154-9-6 were disbursed on last year's account.

Kyetpyoogan plantation.

75. The road between Palun and Kinpadee has been completed; and a bridge over the Magayee stream is being built by the Forest Department out of provincial funds, connecting this road with the villages to the north of the Magayee reserve.

Roads.

IV.—TOUNGOO FOREST DIVISION.

76. The Kaboung reserve, with an area of 345 square miles, including 65½ square miles of Karen area, was sanctioned during the year, raising the area of reserve forests in this division to 426 square miles.

Area of Kaboung reserve.

77. The Kannee reserve of 60 acres is not in existence, and has been shown by a mistake in form 45 for some years.

Kannee reserve not existing.

78. The permanent demarcation of the East Swa reserve was completed at a cost of Rs. 621. The marks adopted are mounds of earth or cairns of stones heaped round pyinkado posts, the tops of which are squared and painted white and numbered with a serial number. There are 60 such marks. Of the amount expended, Rs. 129 represent the cost of clearing.

Demarcation of East Swa.

79. The final demarcation of the Bonedoung reserve was almost completed, Rs. 152 being spent during the year.

Bonedoung reserve.

80. The Demarcation Staff, consisting of Mr. T. C. Mitchell, C.S., Assistant Commissioner, and Mr. J. W. Oliver, Deputy Conservator of Forests, have examined and finally reported on two proposed reserves,—the Lower Thaing and the Kyoukmasin reserves. Both of these reserves are rich in teak.

Final proposals.

81. Mr. Oliver has submitted proposals for the reservation of forest tracts on the Swa, Loneyan, and Myohla rivers, as well as for a tract including the teak areas on the Binbyeh and Gwaytheh. The Divisional Officer has prepared proposals for two small but valuable areas on the Panbay and Kyoungmaney.

New forests examined.

82. The expenditure of the year under A VIII*a* is—

Expenditure under A VIII*a*.

	Rs.
Pay of Civil officer	5,848
Travelling allowance of Civil officer	404
Permanent demarcation	773
Temporary	99
Total	6,619

83. The evergreen belts commenced round the Yaneh and Pyoon stream reserves have been extended. The plants grow very slowly, but gangaw, mango, and jack have established themselves; thitto has failed. The planting up of the grassy blanks (kwins) within these reserves has not been an unqualified success;

Improvement in planting of evergreens.

but many parts are fairly stocked with thingan, jack, mango, and thabyay. The floods are our enemy.* Rs. 507 were spent on these works.

Mahogany. *Pithecolobium saman.*

84. During the year two packets of seed were received, but only five germinated, and of these only four plants have succeeded. *Pithecolobium saman* as usual has germinated freely, and 520 young plants were put out into the reserve.

Coffee.

85. Experiments were made with coffee at the Pyoon choung reserve. Only 380 plants out of 10,000 seedlings survived the hot weather; but at Thandoung 15,000 survivors were counted on the 31st March out of 17,000 seedlings originally put out. All our plants were put out too young, which to a great extent may account for the large percentage lost. The coffee at Thandoung covers about 7 acres. Three plants planted two years ago were in full bearing this year. There is no doubt that coffee cultivation in the Thoukyaygat has some future.

Tea.

86. In how far tea will succeed is still difficult to foresee. The long hot weather affects the tea plants much more even than the coffee. At the Pyoon choung reserve a number of seedlings were raised and transplanted, and up to the beginning of the hot weather looked healthy, but since then all have died. At Thandoung 2,000 plants were alive in March out of 2,250 put out, but they all suffered from drought, whereas the coffee looked healthy.

Cinchona at Pyoon choung.

87. The hot weather at Pyoon choung reserve is too severe for cinchona. The most careful experiments were made with cinchona of all species. They were planted out at different times in the rains and in all sorts of localities, but out of 7,000 plants only 48 remained alive. The climate of Pyoon choung reserve is not suited to the cultivation of coffee trees or cinchona, and a further attempt to introduce them there would be waste of money and labour.

Cinchona at Thandoung.

88. The general appearance of cinchona at Thandoung is certainly better than in former years, but the plants are extremely sensitive. The Divisional Officer reports that a hot sun coming out after a shower of rain scorches trees 6 to 8 feet high, and that a plot near the forcing-houses less well-protected by grass and weeds than the rest of the plantation was so burnt up in a few days in November that the trees have to be cut down to the ground. A single exceptionally hot year may kill a number of the finest and oldest trees, as was the case some four years ago. Constant irrigation during the hot weather would seem to be the only condition under which the trees can flourish in this climate. There has not been a single application for plants, though Government offered a reward of Rs. 100 to a Christian Karen if he would plant some cinchona in his irrigated betel-vine plantation. The future raising of seedlings may therefore be dispensed with. The expenditure on cinchona, tea and coffee is charged as usual to provincial services, and amounts to Rs. 4,869-9-0 during the year.

Fire-protection in Yaneh.

89. Three fires occurred in the Yaneh reserve, and a total area of about 100 acres were burnt. This was kaing-grass to the greater extent, but also about 40 acres of forests in which natural reproduction was successful, as well as two small teak toungyas of 1877-78. The larger plants have suffered but little, but most of the smaller ones have to be stumped down to the ground. The two first of the fires originated within the reserves, and the forester and watchers assert that they found fresh tracks leading to the village of Zeebyoobin in each case. Nothing else however could be proved. The third fire, which caused the greatest damage, crossed the Thaing stream from the south, and unluckily at a time when the fire guards were engaged in watching a fire approaching near the Yaneh stream; else the fire would have been stopped at the path. This fire is said to have originated in a toungya belonging to Zeebyoobin village, which was burnt without giving notice

* Since I have marched down once more through the plains south of the Yaneh and have seen how even mature forests are converted into savannahs by the combined actions of floods caused by fisheries and fire, I feel very doubtful regarding the planting up of kwins without first improving the drainage.

to the fire guards. There is an old standing private quarrel between the thoogyee of the tike and Moung Mya, the forester, but enquiry fails to establish any connection between this and the firing of the reserve. The provisions of the new Forest Act will doubtlessly make fire-protection less difficult. The forester and watchers displayed promptitude in beating out the three fires.

Pyoon choung plantation.

90. The Pyoon choung plantation was successfully protected. A small fire of no consequence occurred in March, but was at once beaten out after burning through about 5 acres of jungle. It crossed a piece of the evergreen fire-trace and killed 40 evergreen plants and 20 *Pithecolobium*.

East Swa reserve.

91. This reserve was not specially protected, but in finally demarcating the reserve the lines were cleared and about one-third of the whole area escaped fire.

Cost of fire-protection.

92. The cost of fire-protection amounted to Rs. 580 for the Pyoon choung reserve and Rs. 229 for Yaneh, of which Rs. 471 and Rs. 221 respectively were spent during the year under report.

V.—SHWAYGYIN DIVISION.

Area and boundaries of Kyoondoung reserve.

93. During the year under review the Kyoondoung reserve, 1½ square miles, an exceedingly rich area, was sanctioned and demarcated.

Wabalat reserve proposed.

94. Preliminary proposals were submitted for the Wabalat forests as an extension of the Kyoondoung.

CHAPTER III.

UNRESERVED FORESTS.

Protection of teak outside reserves

95. The law regarding the protection of teak and other trees in unreserved forests remains unaltered, but has been extended over the whole of the Pegu circle. Teak trees growing on the bunds between paddy-fields have been sold in the Tharrawaddy division. The Thoukyaygat has been formally exempted from the rule prohibiting the cutting of toungyas in places were teak trees, large or small; are growing, but the same exemption has practically taken place for many years in the forest in the Mindone township and the belt of teak-producing forests underlying the Pegu Yoma on the Boolay, Pudday, and North Nawin streams.

As much as possible of these forests has of late years been included in reserves; but the total general protection of teak, especially young teak springing up in ponezos, would necessitate the removal of many a Yabein village. As it is, these villages are extremely poor, due no doubt to their clinging to silk cultivation. They never cultivated paddy enough to support themselves, but relied on their large profits to buy food. Since then silk has but slightly risen in value and paddy 100 to 150 per cent. To further curtail their toungya-grounds would utterly ruin them, or at least accelerate their ruin. They are almost useless, but their removal, which would ensue from a strict enforcement of the above-quoted rules, is too much opposed, and opposed by men whose well-considered opinion cannot be lightly gainsaid.

Breaches of forest rules.

96. The departmental selling of teak trees on paddy-lands led at once to amateur attempts in the same direction. A Burman sold 60 standing teak trees in the fields near Gyobingouk, but was found out and sentenced to one year's rigorous imprisonment. An even more serious attempt was made in the same direction near Letpadan during the absence of the Divisional Officer on tour. A clerk named Vargos from Rangoon, self-appointed as Assistant Conservator on special duty, came to Letpadan with a Burmese clerk to sell the right to extract woods of the reserved kinds, circle by circle, at the rate of Rs. 200 each. Several persons bought circles and advanced Vargos Rs. 900 thereon. The purchasers were taken to the public offices at Rangoon. Their permits were taken into a room at the Accountant-

General's Office and returned countersigned by the Conservator. Three persons were prosecuted, the brothers Vargos, the pseudo Assistant Conservator and Conservator, and the moonshee. The one of the Vargos personificating the Assistant Conservator and the moonshee were each punished with three years' rigorous imprisonment; but the other Vargos was declared unconnected with the swindle, his brother having utilized the office in which he was employed without his knowledge.

No other very serious breaches of the forest rules happened during the year, and it is hardly necessary to enter into all minor offences in detail. It is satisfactory that a very large percentage of all forest cases tried resulted in convictions. The punishments on conviction show how differently forest offences are regarded by different Magistrates. In Tharrawaddy, for instance, four men were convicted for felling cutch trees and fined Rs. 50 each; whereas in Thayetmyo six men were fined Rs. 5 each for cutting padouk, and seven men for cutting Rs. 255 worth of teak, Rs. 63 between the seven, or Rs. 9 each. In one case in the same division the timber only was confiscated and no fine imposed; and in another case a fine of Rs. 10 in addition to the value of the timber, Rs. 47. The Deputy Commissioner of Henzada has punished timber-theft in one case with three months' simple imprisonment, 30 stripes in another, and again with one month's imprisonment and a fine of Rs. 50 in a third case.

CHAPTER IV.

Yield, Working, and Financial Results.

1.—Timber and other Forest Produce extracted by Government agency.

97. Contracts had been entered into for the extraction of 2,500 teak logs during the year, and 3,502 were actually worked down into the floating streams, 1,243 into the Myaydeh, into the Nawin 2,152, and 107 into the Mindone stream. Of these, however, only 1,282 reached the Irrawaddy and were floated to Rangoon. The rest became neaped. Fifty logs of inferior teak were extracted from Mahathaman, and delivery was taken at the Thehgone Railway-station. They are intended for the cartmakers' trade in Prome, but have not as yet been disposed of.

Extraction of teak from Prome forests. One thousand two hundred and eighty two logs sent to Rangoon.

98. The cost of extracting 1,334 logs amounts to Rs. 16,800, or Rs. 12-9-6 per log.

Average cost of extraction from Prome forests.

99. There is but one outstanding of Rs. 524-8-0, against 295 logs of neaped timber, and these represent work done to the amount of at least Rs. 2,000.

Outstandings.

100. In addition to 2,220 logs neaped 3,000 logs have been felled, cut, and dragged during the year, thus far promising a good out-turn from the Prome forests.

Next year's prospects.

101. Ten more of the ingyin logs contracted for in the previous year have been brought out, swelling the stock in the Prome local depot to 73 da-squared logs of ingyin and thitya; of these, 47 were sold locally for Rs. 632. The price does not much more than cover the expense incurred.

Ten ingyin logs extracted.

102. Seven thousand nine hundred and seventy-nine teak logs were extracted by Government contractors at a cost of Rs. 73,790-9-0. All but one log were delivered alongside the Rangoon central depôt at an average cost of Rs. 9-3-4 per log. Fifty-three logs of this timber were conveyed to Rangoon by railway.

Extraction of teak from Tharrawaddy forests.

103. The charges amounted to Rs. 365, or nearly Rs. 7 per log, as compared with Rs. 2 or cost of floating. The high rate is however to a great extent due to the fact that as yet the railway possess no suitable timber trucks.

Timber in the round by rail as yet too expensive.

When once a few small saw-mills have been started in the districts, there is no doubt the Burma railways will carry large quantities of squared timber, especially of pyinkado and other valuable but heavy woods.

Neaped timber.

104. Two thousand and twenty-five neaped logs were counted in the various streams after the floating season was over.

Outstandings.

105. Only one contractor remained at the close of the year with outstandings against him, and that for no fault of his. The Gamone stream suddenly silted up completely for a length of two miles, leaving about 1,000 logs belonging to this contractor hig hand dry.

Teak extracted in Rangoon division.

106. Only 149 teak logs were delivered at the Rangoon depôt from the forests of the Rangoon division at a cost of Rs. 1,567-3-0, averaging Rs. 10-8-3 per log. A contract was also entered into to bring out some old teak logs on the half-profit principle. At first the contractor insisted that a division log for log should take place. He brought out 170, and then 85 logs, falling to the share of the Government, were locally disposed for Rs. 1,466. He then brought 92 logs; but these were sold for Rs. 1,312, the contractor's share coming to Rs. 650. About 350 teak poles from Kyetpyoogan pantation were sold for Rs. 34-6-0 at the rate of Rs. 10 per hundred. Sixteen unextracted teak logs were sold by the Conservator for the building of a ponegyee kyoung at Rs. 189.

Pyinkado extracted.

107. One thousand two hundred and five pyinkado logs have been extracted by this Department, and were made over to the Railway Department in depôts along the line of rails.

Average cost in Toungoo forests.

108. One thousand five hundred and twenty-six teak logs were extracted from the Koon, Swa, Thaing, and Kaboung forests, and delivered alongside the Rangoon Central Depôt, all but one, which were sold at Shwaygyin at a cost of Rs. 29,621-8-0, or an average cost of almost Rs. 19-6-7.

High average rates explained.

109. This requires some explanation. Four years ago no contractor could be found for the Koon stream, where a large quantity of timber had been left by the former permit-holder. Moung Kawee, an enterprising man, alone came forward and offered to work the forests on half-profit. All logs were to be brought to the depôt, sold, and the amount realized was to be divided. During the first three seasons he slightly lost by the transaction, and, as may be seen in paragraph 165 of last year's report, he received in 1879-80 only Rs. 18,377-10-7 for 2,054, or Rs. 8-15-1 per log. This year however he brought 1,111 logs exactly at the time when timber was most scarce, and we realized Rs. 43-2-0 per log for timber which last year would not have fetched more than Rs. 22. This is satisfactory.

Average rates.

110. The average rates per log for the other rivers were—

	Rs.	A.	P.
Swa	14	12	3
Kaboung	18	10	7
Thaing	10	12	2

Besides these the Swa contractor extracted 87 short pieces: these were too bad to be sent to Rangoon, and were sold to him for Rs. 420 and cost of extraction which never was charged.

Thitka.

111. Thitka logs were extracted and delivered at Rangoon alongside the Central depôt at a cost of Rs. 792-9-8, or an average cost of Rs. 14-2-4. One hundred and forty-one thitka logs were neaped in transit.

Pyinkado sleepers.

112. Pyinkado and lehzanee sleepers were extracted departmentally, and by the end of the year 10,000 were ready for delivery.

Contractors' outstandings.

113. The outstanding against contractors amounted to Rs. 200, which has since been adjusted. This does not include Meer Hosain's bad debt of Rs. 1,603-6-8, to write-off which the sanction of the Government of India has been requested.

114. From the forests in the Shwaygyin division 100 kanyin logs were extracted by a contractor on the half-profit principle. The logs were divided and 50 were taken on stock in the Central Depôt at Rangoon. There are no outstandings against contractors.

Shwaygyin division.

115. During the year 231 logs of thitka and thitkado were extracted from the Western forests and brought to the Bassein depôt at a cost of Rs. 1,566-1-4, or Rs. 6-12-6 per log. Thirty-eight logs of thitka from the Bassein depôt stock were delivered at the Rangoon central depôt at a cost of Rs. 188, or Rs. 5-3-6 per log.

Western division.

116. There is an outstanding of Rs. 5,300 against the late contractor Moung Pay. He died leaving his outstandings amply covered by four elephants in the hands of Government; but unluckily two of these animals have died since in the hands of Government, and it will be impossible to recover more than Rs. 3,000 from the animals left.

Outstandings.

2.—Drift Timber Operations.

117. One hundred and five logs of teak salved on the Irrawaddy during last year were disposed of for Rs. 807. During the year 515 logs were salved at a cost of Rs. 2,281-9-6; they were duly advertised in Prome, Myanoung, Henzada, Yandoon, and Rangoon; and 235 logs were made over to claimants on a payment of Rs. 706 salvage dues. One hundred and four logs are reported as despatched to the Agency, but 113 were received: these contain probably 10 logs reported as lost; of these, 113 logs, 95 were successfully claimed and were released on the payment of Rs. 452-6-0; 18 were disposed of for Rs. 525. The balance of drift was sold locally for Rs. 6,597. One in log, two pyinma, and 20 pyinkado posts were also salved and sold for Rs. 94.

Drift operations on the Irrawaddy.

118. The balance of drift timber in hand in the Sittang drift timber depôts consisted of 475 logs.

Drift operations on the Sittang.

119. During the year 6,576 logs were salved at a cost of Rs. 11,385-4-6. Of these, 6,011 were claimed on payment of a salvage of Rs. 20,373-8-0. One hundred and eleven logs were locally sold for Rs. 1,574-9-6, 6 were departmentally used for mooring stakes, 184 were sent to the Central depôt, and 739 remained in the Myitkyo depôt still under notice. The depôt acknowledges 194 logs from Shwaygyin and Toungoo. This is a mistake. Ten of the logs were Government logs, which were left in Myitkyo and were sent down with a drift timber raft. The Agency realized for the sale of 194 logs Rs. 4,451.

Cost.

Salvage
Local sale
Depôt sale
On hand
} 4,451.

120. On the Rangoon and Pegu river 264 logs, including 64 logs of kanyin and pyinma, were salved at a cost of Rs. 320-14-3. Eighty-four of these were claimed, and the salvage paid amounted to Rs. 257-10-0. One hundred and eighty-nine were sold through Agency for Rs. 2,277 and 91 logs remained still under notice.

Drift operations on the Rangoon and Pegu river.

121. Sixty-five logs of sea-drift timber were brought in to the Central depôt; of these, 44 were sold for Rs. 1,543, half of which was paid to the sea-drift timber collectors. Twenty-one logs of sea-drift remain still under notice.

Sea-drift.

3.—Rangoon Agency and Timber Depôt.

122. The balance of teak timber in hand in the Central depôt on the 1st April 1880 amounted to 13,814 logs, of which however only 1,404 belonged to the I class, and to 79 teak sleepers. The whole was estimated at 12,422 tons. Of other woods the depôt contained 20 logs and 339 sleepers, estimated to contain 25 tons.

Balance of timber in stock.

123. During the year 11,673 logs of teak timber were received, which were classified as 1,008 of the I class and 10,665 of the II class. Five hundred and seventy-five logs of woods

Receipts during the year.

of other kinds and 1,015 pieces of thitka scantlings were also brought on to the depôt books, as well as 636 logs of drift timber. These arrivals contain 10,686 tons of teak and 609 tons of woods of other kind.

Disposals during the year.

124. The disposals during the year amounted to 1,940 I class teak logs, 16,603 of the II class, 595 logs of other woods, 339 pyinkado sleepers, and 1,015 scantlings, or 16,830 tons of teak and 639 tons of other kinds.

Balance at end of the year.

125. The balance in the Central depôt consisted at the end of the year of only 472 I class and 6,472 II class teak logs, besides 79 teak sleepers, or a total of 6,273 tons.

Annual ledger account with divisions.

126. The depôt ledger with four forms will, according to recent order, be found in the Appendix, showing the amount of timber in stock on account of each division on the 1st April 1880, arrivals from each division during the year, disposals on account of each division during the year, and timber in hand at the Central depôt on account of each division.

Sales.

127. The sale of 330 yard and mast pieces and I class Doogies realized Rs. 17,974, or an average of Rs. 54-7-6per log, or Rs. 47-3-0 per ton. The sale of 18,026 Loozars and II class Doos and Yatts realized Rs. 6,01,663, or per log Rs. 34-0-5 and per ton Rs. 37-11-10.

	Rs.	A.	P.	
Kanyin realized	26	0	0	per ton.
Thitka and thitkado	24	13	2	,,
Thitya, ...	34	7	3	,,

Present stock.

128. The quality of the present stock is even inferior to that of previous year, but with the present demand the stock in hand may be valued at Rs. 2,25,000.

129. The Basscin depôt, the only terminal sale depôt besides the Central depôt in Rangoon, contained in the beginning of the year 97 logs. In addition 231 logs, woods of other kinds, arrived at the depôt during the year, making in all 328 logs, of which 300 logs were disposed of, leaving a balance of 28 logs at the close of the year.

4.—Girdling.

Myaydeh range.

130. In the Prome division 3,200 trees were girdled outside reserves. In the Myaydeh range 2,000, of which 980 were girdled on the Pudday stream, between the Kyoukko stream and Neebatoung stream; and the balance in the Boolay forests on the Choung-gounggyee, Bangone, and Tabalaing streams.

Nawin range.

131. In the Nawin range 1,200 were girdled in the South Nawin forest. The cost of the girdling operations amounted to Rs. 674.

Tharrawaddy division.

132. In the Tharrawaddy division 8,021 trees were girdled in the Toungnyo forests outside the reserves, including 1,628 girdled in April 1880 and registered in last year's special girdling report, 5,183 on the north bank of the Toungnyo, and 1,213 on the south bank.

Minhla forests.

133. In the Minhla forests 1,003 trees were girdled outside the reserve at a cost of Rs. 202-8-0.

Rangoon division.

134. In the Rangoon division 1,173 teak trees were girdled outside reserves, or proposed reserves, on the Letpan stream. It was contemplated to girdle 2,000, but the work had to be broken off on account of scarcity of water. The work cost Rs. 234-9-6. One thousand pyinma trees have been girdled on the Kadoogweh, Shawdone, Sinboke, and Sinsweh streams. One thousand and five teak trees have been also girdled in the Pounglin valley, and Rs. 216 were spent on the work.

Toungoo division.

135. In the Toungoo division 6,677 teak trees, including 3,068 girdled in April, as already mentioned in special girdling report, and 520 pyinma were girdled, and Rs. 1,488-7-1 were paid thereon.

Girdling inside reserves.

136. Girdling took place only within two reserves. In the Toungnyo reserve 19 trees were girdled by a mistake; and in the Mokeka Beelin the customary 200 trees were girdled to give work to the Karens when not employed on teak toungya or fire-tracing. These trees were girdled by the Divisional Officer, who at the same time made a valuation survey of the area over which he girdled with the most satisfactory results:—

Girdled.	Trees 6 feet and above left ungirdled.	Trees 4 feet 6 inches.	Trees 1 foot 6 inches to 4 feet.
200	168	469	6,294

Girdling statements, &c.

137. The girdling statements and sketch maps, as unnecessarily swelling the volume of the annual report, are submitted with a special memorandum.

5.—Timber removed by consumers and purchasers free and on trade permits; also from revenue-stations.

Teak extracted by purchasers in Prome division.

138. Two Public Works Department contractors in the Myaydeh range, Prome division, were permitted to extract II class teak for bridge-work on the Allanmyo road, paying at the rate of Rs. 35 per ton. This yielded the department Rs. 3,121 on 86½ tons. Five tons of refuse teak were sold for Rs. 15 a ton to purchasers, bearing cost of extraction. Rs. 880 were received during the year as revenue for working up otherwise useless teak into cart-wheels at Rs. 10 per ton.

Teak extracted by purchasers in Tharrawaddy division.

139. In the Tharrawaddy forests Rs. 1,885-3-11 were realized by the sale of 131 tons of refuse teak, the purchasers paying for extraction. Ninety-six logs, which had drifted into kaing-grass, and had there been buried in sand and mud, were sold for Rs. 674-7-6, the purchasers digging them out and extracting them. Eight thousand one hundred and seventy-nine small teak trees, roughly estimated to contain about 1,500 tons, standing in paddy-fields, and which would sooner or later have been destroyed, were sold for Rs. 11,623-4-3; and 1,921 cutch trees were disposed of from reserves at Rs. 3,010 and 23 toukkyan at Rs. 26.

Teak extracted by purchasers in Rangoon.

140. In the Rangoon division 1,685 tons of pyinkado were extracted by the Public Works Department for the construction of bridges for feeder-roads, and Rs. 6,128-12-0 were paid thereon.

Trade permits and tonnage in Prome.

141. The Deputy Commissioner of Thayetmyo issued 216 trade permits, and realized thereby Rs. 1,337-8-0, against Rs. 780 credited by the Deputy Commissioner of Prome on 122 trade permits granted by that officer. The permits were chiefly for In-wood, and next for pyinkado, thitya, and ingyin. The amount realized on tonnage fees was Rs. 3,454-10-3 at Ywatoung revenue-station and Rs. 1,272-8-2 at the Prome revenue-station. Considering that the revenue per ton amounts to eight times the fee paid for the felling of one tree, this is not satisfactory. Prome does not even show Rs. 2 for every rupee realized on permit fees.

Trade permits and tonnage in Tharrawaddy division.

142. Four hundred and thirty-one trade permits were issued in the Tharrawaddy division for—

In	1,969
Pyinma	645
Pyinkado	1,525
Thitya	14
Ingyin	10
Thingan	68
Kanyin	282

or 4,458 trees of sorts, yielding Rs. 1,599-12-0 in permit fees and Rs. 9,581-9-6 as tonnage.

Trade permits and tonnage in Rangoon division.

143. In the Rangoon division trade permits were issued for 7,894 trees, yielding a revenue of Rs. 2,376-8-0. Under these permits 8,224 logs were extracted, and a revenue of Rs. 21,281-12-3 was realized as tonnage. There has again been a falling-off in the number of permits taken out as well as in the amount of logs passing revenue-stations. There are various reasons for this. In the first instance the people use mango, zinbyoon, psinga, teing, teingkala, and other unreserved trees in larger proportion; secondly, the girdled pyinma gets very scarce in the forests; and thirdly, several of our forest subordinates have proved themselves dishonest. Tables showing the amount of revenue-paying wood and woods of the unreserved kinds, as well as bamboos and other minor forest produce which passed the revenue-stations of Tawlateh, Lehgoo, and Awaing will be found in the Appendix.

Trade permits and tonnage in Toungoo.

144. During the year trade permits were issued in the Toungoo division for 1,383 trees of the reserved kinds, the permit fees amounting to Rs. 655-8-0, of which Rs. 40 are still due from the Executive Engineer, Toungoo. During the year 601 logs were extracted and yielded a tonnage revenue of Rs. 3,823-11-0. There is a marked falling-off in the revenue, entirely due to a reduced demand throughout the province for thingan boat-hulls at the high prices which they formerly realized.

Trade permits and tonnage in Shwaygyin.

145. During the year trade permits were issued in the Shwaygyin division for 1,231 trees, realizing Rs. 394, pyinma being the tree most largely in demand. Rs. 3,367-7-0 were realized as tonnage charges on timber passing revenue-stations.

Trade permits and tonnage in Western division.

146. In the Western division trade permits were issued by the Deputy Commissioners of Henzada and Bassein for 3,661 trees, realizing in permit fees Rs. 1,502-4-0, pyinkado and in being almost the only trees asked for. During the same period, Rs. 6,634-2-0 were levied as tonnage at revenue-stations.

Free permits

147. The following were, as far as can be ascertained, the number of free permits taken out during the year :—

District.	Number of trees.
Thayetmyo	15,518
Prome	12,685
Tharrawaddy	16,302
Rangoon	1,752
Toungoo	21,590
Henzada	9,877
Bassein	.
Total ...	67,674

There is a slight decrease in the number of trees granted under free permits, probably because people prefer to utilize trees of other kinds rather than go to the myooke to obtain a free permit.

6.—Cutch and other Minor Forest Produce.

Fee permits per cauldron.

148. The fee for permits during the year varied in the different districts. In Thayetmyo Rs. 12 per cauldron was levied, in Prome and Tharrawaddy Rs. 10, and Rs. 5 in the Toungoo district.

Cutch permits in Prome division.

149. In the Thayetmyo district 2,289 permits were issued, yielding Rs. 26,557; and Rs. 17,013 were realized in the Prome district on the same account. The Prome Forest division thus shows a cutch revenue of Rs. 43,570, against Rs. 36,459 during the previous year. Many of the permit-holders began to boil late; but even if any permit-holder used only 60 trees, the total number consumed amounted to 240,000.

150. In the Tharrawaddy division the fees collected on cutch permits amounted to Rs. 32,675. The inhabitants of the forest villages, and even Karens, have taken to extracting cutch, and the cutch tree outside reserves is rapidly disappearing. A sure sign of this is that people have begun to utilize small trees, though the outturn of cutch from these is miserably small. The number of trees consumed is estimated at about 190,000.

Cutch permits in Tharrawaddy division.

151. The annual revenue collected in the Toungoo division by the civil authorities has increased from Rs. 2,400 to Rs. 4,000 owing to the increased demand for cutch permits. The number of trees utilized cannot be ascertained, as the revenue statements furnished by the Deputy Commissioner do not afford sufficient details.

Cutch permits in Toungoo.

152. In the Western division Rs. 821-8-0 were levied on cutch extraction. The number of trees boiled is estimated to amount to 6,500.

Cutch permits in Western division.

153. The cutch revenue returns from the Deputy Commmissioners of Thayetmyo and Prome contain a few rupees levied for extraction of charcoal and wood-oil; but the matter is very small, and the returns are kept in such a way that all permits would have to be examined to extract the correct figure.

Minor forest produce in Prome division.

154. In the Tharrawaddy division Rs. 185 were levied on the tapping of wood-oil and Rs. 197 on the manufacture of charcoal. In addition 631,400, bamboos were extracted by purchasers from reserves, for which Rs. 1,578-8-0 were paid. By the sale of thetkeh, firewood, honey, shaw fibre, and other minor forest produce from the reserves the sum of Rs. 697-7-11 was realized and Rs. 286 for the extraction of wood-oil from the reserves.

Minor forest produce in Tharrawaddy division.

155. In the Rangoon division firewood and charcoal from reserves realized a revenue of Rs. 310, bamboos Rs. 311-12-0, and other minor forest produce Rs. 320.

Minor forest produce in Rangoon division.

156. In the Shwaygyin division Rs. 635 were levied on charcoal permits, Rs. 696 on kanyin-oil permits, and Rs. 465 for permits to extract black varnish.

Minor forest produce in Shwaygin division.

157. In the Western division Rs. 228-8-0 were realized on charcoal-burning permits.

Minor forest produce in Western division.

158. The only reliable information available regarding the quantity of timber, bamboos, and other forest produce extracted, which is not liable to payment of revenue, is contained in the statements of Tawlatch, Awaing, and Hlaigoo, which are appended. Not even a guess can be made at the whole quantity extracted, as every village and town is supplied with it without let or hindrance.

Unreserved trees and untaxed forest produce.

7.—Yield of Government Forests.

159. The yield of Government forests is, as far as ascertainable, shown in the following table. The proportion, even of unclaimed drift timber, the produce of Government forests, is very small, as all timber that can be traced is released by the contractors by payment of salvage, and is then brought on the books as timber extracted by Government agency. All our unclaimed drift consist of unmarked foreign, but more often of marked foreign timber the owner of which has not taken the trouble to follow it up.

Produce of Government forests.

Yield of Government Forests.

Division.	Extracted	Teak.		Reserved trees.	Cutch.	Charcoal.	Wood-oil.	Unreserved trees.	Bamboo.	Shaw.	Thatch.	Remarks.
		Logs.	Tons.	Logs.	Trees.		Viss.	Logs.	Number.	Bundles.		
Prome.	By Government agency	1,342	1,234	10	..	..	..	..	..	..	..	Also 35 teak saplings.
	By purchasers	239	105	..	..	..	..	..	..	..	..	
	Under trade permits	..	..	..	2,40,000	..	..	..	..	..	..	
	Under free permits	..	..	..	..	..	..	..	..	..	..	
	Free	..	..	..	..	..	..	Unknown.				
Thabawaddy.	By Government agency	9,482	8,707	..	..	..	..	..	..	..	..	
	By purchasers	8,525	1,631	1,921	1,90,000	1,360	..	23	6,31,400	..	..	Also 33 slabs and stumps.
	Under trade permits	..	..	5,404	..	..	..	..	..	..	..	
	Under free permits	..	..	..	..	..	..	..	..	..	..	
	Free	..	..	..	..	..	..	Unknown.				
Rangoon.	By Government agency	149	140	1,653	..	..	..	..	..	..	..	
	By purchasers	92	46	..	..	..	..	..	..	..	..	
	Under trade permits	..	..	8,224	..	1,240	..	..	..	..	..	
	Under free permits	..	..	..	..	..	..	..	..	..	..	
	Free	..	..	..	..	..	..	21,957	28,42,322	6,670	7,48,285	
Toungoo.	By Government agency	1,616	1,483	197	..	..	..	..	..	..	..	
	By purchasers	..	..	..	..	..	..	..	..	..	..	
	Under trade permits	..	..	601	Unknown	320	..	..	..	..	..	
	Under free permits	..	..	..	..	..	..	..	..	..	..	
	Free	..	..	..	..	..	..	Unknown.				
Shwaygyin.	By Government agency	..	..	51	..	..	..	..	..	..	..	
	By purchasers	..	..	..	..	..	..	..	..	..	..	
	Under trade permits	..	..	..	..	2,280	..	..	..	..	..	
	Under free permits	..	..	..	..	..	..	..	..	..	..	
	Free	..	..	..	..	..	..	Unknown.				
Western.	By Government agency	..	..	231	..	..	..	..	..	..	..	
	By purchasers	..	..	..	..	..	..	..	..	..	..	
	Under trade permits	..	..	..	6,500	1,520	..	..	..	..	..	
	Under free permits	..	..	..	..	..	..	..	..	..	..	
	Free	..	..	..	..	..	..	Unknown.				
	Total ..	21,445	13,346	18,192	4,36,500	6,720	..	21,980	34,73,722	6,670	7,48,285	

NOTE.—Agency Division shows 1,015 scantlings of other kinds.

8.—Financial Results.

Prome division.

160. The Prome division shows receipts amounting to Rs. 58,863-14-7, against an expenditue of Rs. 57,780-9-9, or a surplus of Rs. 1,083-4-10, to which has to be added Rs. 56,060 realized by the Rangoon Agency Office on account of the Prome division, thus increasing the net revenue to Rs. 57,143-4-10. In the expenditure of the year is included a sum of Rs. 11,091-2-8, which was due on timber delivered in Rangoon during the previous year.

Tharrawaddy.

161. The revenue collected in the Tharrawaddy division amounted to Rs. 69,298-0-9, against an expenditure of Rs. 1,21,875-12-8, leaving a deficit of Rs. 52,577-11-11. The revenue, however, realized by the Agency office by the sale of 13,556 logs amounts to Rs. 4,36,130-5-5, and if this is added the division shows a net revenue amounting to Rs. 3,83,552-9-6.

Rangoon.

162. In the Rangoon division Rs. 24,699-11-10 were realized as revenue and Rs. 34,060-14-11 by the Agency division on account of the Rangoon division. The total expenditure during the year was Rs. 55,817-13-4, leaving a net revenue of Rs. 2,942-13-5. The revenue was somewhat curtailed by two defaulting revenue clerks and two defaulting forest-rangers.

Toungoo division.

163. The revenue of the Toungoo division amounted to Rs. 1,27,494, of which Rs. 1,07,703 were realized by the Agency office by the sale of timber, the total expenditure amounting to Rs. 79,713, leaving a balance of Rs. 47,781. The Toungoo division was also debited with the salaries, &c., of the officer in charge of the demarcation.

Shwaygyin division.

164. In the Shwaygyin division a revenue was realized amounting to Rs. 18,987-8-1, and the expenditure amounted to Rs. 18,478-3-5, leaving a surplus of Rs. 509-4-8, and if Rs. 5,248-8-9 are added which are realized by the Agency office on account of the division, the net surplus amounts to Rs. 5,757-13-5.

Western division.

165. The Western division exhibits an income of Rs. 23,181-13-10, against an expenditure of Rs. 18,589-3-8, leaving a balance of Rs. 4,592-10-2 in favour of the division. The income includes Rs. 931 realized by the Rangoon agency.

Agency and Depôt.

166. The Agency and Depôt were kept up at an expenditure of Rs. 54,329, and Rs. 1,264 were expended on the salving of logs. The revenue realized has been credited as follows :—

	Rs.
Prome	56,060
Tharrawaddy	4,36,130
Rangoon	34,061
Toungoo	1,07,703
Shwaygyin	5,249
Western	931
Agency	8,671
Total ...	6,48,805

CHAPTER V.

General.

Obstructions in floating streams.

167. The lower course of the floating streams in the plains are in many places very unsatisfactory. In the Toungnyo a new channel had been cut, but had again silted up before the end of the rains. The stream has now been examined by officers of the Public Works Department, who will it is hoped devise some plan to prevent this annual silting. The Bobin and Gamone also silted up ; but the channel cut some three years ago in the Beelin has proved a success, has deepened, and is still open for floating.

The streams between the Koon stream and the Pegu stream are hopelessly obstructed, and it will be a matter of considerable difficulty to rectify their courses: these obstructions have been growing for many years, and are entirely due to fisheries. The construction of weirs, whether of a permanent or temporary character, on these rivers (emerging as they do from a mountainous country into an almost level alluvial plain) is equally objectionable, as the sudden accumulation of forest debris behind the *yin* or screen-work of a temporary weir causes an obstruction as disastrous in its effects as that caused by any permanent weir. At present these streams cut new beds during every rainy season, which are of course at once choked up by trees falling from the sides and are thus rendered perfectly impassable. Forests are swamped, trees killed, then destroyed by fire, and the areas are soon transformed into useless kaing-grass plains.

Buildings. Toungoo rest-house.

168. In the Toungoo division the rest-house at Tabetgway was completed for Rs. 500; a shed was erected for mahout and coolies for Rs. 252; and Rs. 92 were spent to repair the new rest-houses which were damaged by an earthquake. Rs. 947 were expended on the Toungoo depot, Rs. 525 of which represent the cost of pyinkado posts fixed into the bank and connected with chains to moor rafts and to keep loose timber within the chains. This arrangement has worked perfectly, and for the first time for years no timber has been lost; in former years the loss has been considerable. Five temporary guard-houses were built at the Rangoon timber depôt, the old ones being unsafe. In all divisions the rest-houses have been repaired, and in the depôt the buildings, elephant-shed, the bridge over the Tapaing stream, and the enclosure round the elephant-tank.

Toungoo depôt.

Rangoon timber depot.

Elephants including one calf.

169. At the beginning of the year 37 elephants were attached to the several divisions in the Pegu circle. Of these, six died. This number of 37 was distributed as follows:—

	Elephants.
Prome division	1
Tharrawaddy do.	4 and 1 calf.
Rangoon do.	6 and 1 calf.
Toungoo do.	7
Shwaygyin do.	2
Western do.	1
Depôt	9
Arakan (received during the year)	2

Cost of keep and feed.

170. The average monthly cost per animal in the depot has been Rs. 60-11-0, but that of carriage-elephants amounted to Rs 27-4-10.

Timber imported in British Burma.

171. During the year the following timber was imported by the Irrawaddy and passed at Alanmyo Custom-house:—

Teak logs	2,082
Do. planks	600
Do. squares	414
Do. boat hulls	8
Do. wheel pieces	2,300
Padouk logs	2,088

The importations by the Boolay and Mindone streams amounted to 2,096 logs of teak. Nine thousand seven hundred and sixty-five logs of foreign teak were imported and passed at Toungoo.

Timber exported.

172. The exports of teak during the year amounted, as will be seen from the custom-house statement appended to the report, to 37,870 tons and that of woods of other kinds to 187 tons. A table showing the exports of minor forest produce is also appended. From the above figures and the totals given under "Yield of Government forests" it will be seen that Rangoon was only supplied with 24,488 tons.

I class timber in Rangoon teak market.

173. The Rangoon market in I class timber changed but little from April to November; it was lowest in July, and has only had an upward tendency during the last few months, when I class timber became scarce. The

figures in the appended table are taken from our depôt sale returns; but the quantity of I class timber we have offered for sale was but small, and as the export of I class timber has gradually fallen more or less into the hands of one firm, these prices can hardly be regarded as a safe criterion. The prices of I class timber in London, according to Churchill and Sim's circular, have gradually gone down from October 1879 to December 1880, and have only recovered tone during the last three months. This is supported by an average of actual sales on the Clyde. Tables showing the London and Clyde prices are appended.

II class timber in Rangoon teak market.

174. As regards II class timber, the prices were steady from April to August at Rs. 25 to Rs. 27 per ton, a higher average than usual. At that time the stock of this class of timber in Rangoon began to run low, new arrivals were few, and though most of the better timber had been sold at previous auctions, the inferior quality in the Government depôt fetched from Rs. 30 to Rs. 42 per ton.

Market in other timber.

175. High prices ruled also for timber of other kinds, due partly to the small quantity brought into the market, and partly to the scarcity of teak timber for which it was substituted. The only exception was thingan. For boat-hulls of this kind extravagantly high prices were formerly obtained; for some time the middlemen made large profits, till the producer also demanded higher prices. This year again large quantities of boat-hulls were bought by brokers who however, found on finishing the boats that they could hardly realize the price paid for the timber in the forests. Whether this is due to the introduction of cargo-boats on tidal creeks or to the construction of kanyin boats, which are larger and carry a greater tonnage of paddy, or is due to the depression in the paddy trade or only to a temporary overstocking of the market with thingan boat-hulls, has not been ascertained.

Cutch trade.

176. The trade in cutch has been extremely brisk. Great progress has been made by exporting firms in the process of boiling down the impure cutch as it is delivered from the forest and by the Burman in adulteration.

Inspections.

177. The more important forests, together with plantations and toungya cultivations in all divisions, except the Western, were inspected by the Conservator of Forests in the course of the year.

Officers.

178. The officers throughout gave entire satisfaction; but the health of the gazetted staff was not good. Mr. Huddleston, Sub-Assistant Conservator in Prome, died in November. Mr. Hearle after a severe illness of several months had to leave the province abruptly on six months' sick leave. Mr. Nisbet has on several occasions suffered severely from fever, and was ordered to take a sea voyage to re-establish his health. Mr. Popert suffered continually from fever, and was consequently unable to go on deputation to Ceylon. Mr. Hill and Mr. Weston also suffered from fever. It is evident that exposure in the forests in Burma eventually tells upon all constitutions.

Subordinate establishment.

179. The subordinate establishment contains but few really good men, amongst whom Moung Galay, in charge of North Tharrawaddy, undoubtedly holds the first rank. It is a matter for great regret to have to chronicle that many of our subordinates who have worked all right for years suddenly submit to the temptation to misappropriate revenue or accept bribes. One ranger and two overseers have been convicted and sentenced to terms of imprisonment with hard labour. One ranger and two overseers have absconded and are still at large. In two instances forest peons committed robbery, one accompanied by a most dastardly murder of Moung Tha Oung, a young promising forest-ranger who stood high in the estimation of his Divisional Officer. Both peons escaped to Upper Burma, but the whereabouts of the murderer of Tha Oung are said to be known.

RANGOON:
The 24th June 1881.

BERTHOLD RIBBENTROP,
Conservator of Forests, Pegu Circle.

APPENDICES.

ANNUAL FORM No. 45.—*Area of reserved forests for the year 1880-81.*

DIVISION OR RANGE.	Name of forest and civil district or territory.	ESTIMATED AREA ON 1ST APRIL 1880.		ADDED DURING THE YEAR.		EXCLUDED OR TRANSFERRED TO OTHER HEADS.		TOTAL ON 31ST MARCH 1881.		Number and date of notification of additions and transfers, &c.	REMARKS.
		Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.		
	Salween district.										
WEST SALWEEN ...	Wamoo chòung	3	1,920	...	...	...	...	3	1,920		
	Sinzweh	14	8,960	...	...	...	...	14	8,960		
	Kabeeloo	15	9,600	...	...	...	...	15	9,600		
	Mehnanweh	6	3,840	...	...	...	...	6	3,840		
	Mehwaing	13	8,320	...	...	...	...	13	8,320		
	Shwaygyin district.										
	Beelskatkyee	13	8,320	...	...	...	...	13	8,320		
	Oankangyee	13	8,320	...	...	...	...	13	8,320		
	Amherst district.										
	Tagayloung...	8	5,120	...	...	...	...	8	5,120		
EAST SALWEEN ...	Kamawkala	...	...	9	5,760	...	...	9	5,760	No. 74F., dated 30th September 1880.	
	East Mehpaleh	...	...	60	38,400	...	...	60	38,400	No. 75F., ditto ditto.	
	Mehpaleh	20	12,800	...	...	...	...	20	12,800		
	Mehkaneh	...	...	30	19,200	...	...	30	19,200	No. 76F., ditto ditto.	
	Kyoukket	...	...	19	12,160	...	...	19	12,160	No. 80F., ditto ditto.	
	Mehgala	...	...	10	6,400	...	...	10	6,400	No. 77F., ditto ditto.	
ATTARAN ...	Dalee	12	7,680	...	...	...	...	12	7,680		
	Pakabo	32	20,480	...	...	...	...	32	20,480		
	Nat choung	9	5,760	...	...	...	...	9	5,760		
	Goongyee	43	27,520	...	...	...	...	43	27,520		
	Maoo	14	8,960	...	...	...	...	14	8,960		
	Mehgwa	19	12,160	...	...	...	...	19	12,160		
	Thingannyeenoung	9	5,760	...	...	...	...	9	5,760		
	Kyoon choung	17	10,880	...	...	...	...	17	10,880		
	Total, Tenasserim circle ...	260	1,66,400	128	81,920	...	...	388	248,320		
	East Thayetmyo district.										
Myaulay range.	Tindaw	5	2,880	...	...	...	...	5	2,880		
	Satsoowa	7	4,800	...	...	...	...	7	4,800		
	Thabyayhla	12	8,000	...	...	12	8,000	...	...		
	Bàngone	3	1,920	...	...	3	1,920	...	...		
	Thayetmyo East Yoma ...	125	80,000	...	...	...	...	125	80,000		
	Total ...	152	97,600	...	...	15	9,920	137	87,680		
	East Prome district.										
DIVISION. range.	Thitkat Ayodoung	5	2,944	...	...	...	...	5	2,944		
	Thayet choung and Nyoung-bindet	8	4,864	...	...	...	...	8	4,864		
	Kwaymeedo	4	2,442	...	...	...	...	4	2,442		
	Nebehbyoo	6	3,840	...	...	...	...	6	3,840		
	Shwayloung and Pwagin ...	21	13,120	...	...	...	...	21	13,120		

| Prome | | |

ANNUAL FORM No. 45.—*Area of reserved forests for the year 1880-81*—concluded.

DIVISION OR RANGE.	Name of forest and civil district or territory.	ESTIMATED AREA ON 1ST APRIL 1880.		ADDED DURING THE YEAR.		EXCLUDED OR TRANSFERRED TO OTHER HEADS.		TOTAL ON 31ST MARCH 1881.		Number and date of notification of additions and transfers, &c.	REMARKS.
		Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.		
	Rangoon district.										
	Kyetpyoogan	3	1,800	...	...	...	...	3	1,800		
	Kadat	100	64,000	...	...	...	...	100	64,000		
	Magayee	20	12,800	...	...	...	...	20	12,800		
	Hlaing Yoma	...	...	93	59,520	...	..	93	59,520	No. 43F., dated 2nd June 1880.	Includes Karen area of 13 square miles.
	Okekan	...	...	125	80,000	...	...	125	80,000	No. 63F., dated 18th September 1880	
	Total ...	123	78,600	218	139,520	...	...	341	218,120		
RANGOON	Hmawbee stream (fuel) ...	3	1,700	...	.	...	...	3	1,700		
	Thitpyat do. (do.) ...	5	3,100	...	...	...	...	5	3,100		
	Kyoon do. (do) ...	13	8,600	...	..	...	...	13	8,600		
	Thaboo do. (do.) ...	12	8,000	...	...	...	...	12	8,000		
	Total ...	33	21,400	...	...	...	...	33	21,400		
	Total Rangoon ...	156	100,000	218	139,520	...	...	374	239,520		
	(*Note*) Karen areas ...	...	...	13	8,320	...	...	13	8,320		
	Total area free of toungya privileges	156	100,000	205	131,200	...	...	361	231,200		
	Toungoo district.										
	Pyoon stream	5	3,400	...	...	...	..	5	3,400		
	Yaneh	9	5,800	...	...	...	...	9	5,800		
	East Swa	27	17,280	...	...	...	...	27	17,280		
TOUNGOO ...	Bonedoung	40	25,600	...	.	.	...	40	25,600		
	Kaboung	...	...	345	220,800	...	...	345	220,800	No. 79F., dated 14th October 1880	Includes Karen area of 65·5 square miles.
	Kannee*	...	60	...	...	..	60	...	...		
	Total Toungoo ...	81	52,140	345	220,800	...	60	426	272,880		
	(*Note*) Karen areas ...	..	..	65 5	41,920	...	...	65 5	41,920		
	Total area free of toungya privileges	81	52,140	279·5	178,880	...	60	360·5	230,960		
	Shwaygyin district.										
	Kyoukkee range. Binbyee	10	6,400	...	...	...	...	10	6,400		
	Sittang range. Kyoondoung	...	...	1·5	960	...	...	1·5	960	No. 64F., dated 18th September 1880.	
SHWAYGYIN.	Total Shwaygyin ...	10	6,400	1·5	960	...	...	11·5	7,360		
	Total Pegu circle ...	†1,181	757,565	486	311,040	15	9,980	1,652	1,058,625		
	Total Tenasserim circle ...	260	166,400	128	81,920	..	...	388	248,320		
	GRAND TOTAL ...	†1,441	923,965	614	392,960	15	9,980	2,040	1,306,945		
	Note—Total area allotted for Karens within forest reserves	170	108,800	78·5	50,240	...	...	248·5	159,040		

*Erroneously entered in form 45 of Administration Report of 1876-77.

† N.B.—A difference of 1 square mile compared with last year's totals, accounted for by fractional omissions and corrections.

Annual Form No. 46.—*Area of plantations for the year 1880-81.*

Division.	Name of plantation	On 1st April 1880.		During 1880-81.		On 31st March 1881.		Remarks.
		Area.	Total cost.	Area added.	Cost.	Total area.	Total cost.	
		Acs.	Rs.	Acs.	Rs.	Acs.	Rs.	
Ataran	Thingannyeenoung	10	14,993	6*	.....	16	14,993	* Plantation reported by Mr. Aplin to be 16 not 10 acres in extent.
Salween	Shwaygoon	5	3,767	.....	.....	5	3,767	
	Kolone island	2	3,539	.....	.....	2	3,539	
	Total Tenasserim Circle	17	22,319	6	.....	23	22,319	
Prome	Prome plantation	73	6,999	.....	24	73	9,023	
Rangoon	Kyetpyoogan	683	76,823	.....	1,239	683	78,062	
	Magayee	1,347	1,15,023	149	12,230	1,496	1,27,253	
Tharrawaddy	Choungwa	340	34,727	.....	.....	340	34,727	
	Kwaymakaing	144	15,933	.....	*60	144	15,993	* Pay of plantation goung.
	Myodwin	10	855	.....	32	10	887	
Toungoo	Kannee	70	1,373	.....	.....	70	1,373	
	Pyoon choung	696	24,469	.....	.....	696	24,469	
	Yaneh	9	168	.....	.....	9	168	
	Total Pegu circle	3,373	2,78,370	149	13,585	3,521	2,91,955	
	Grand Total	3,389	3,00,689	155	13,585	3,544	3,14,274	

FORM No. 46A.—*Statement of toungya teak plantations in British Burma for 1880-81.*

Division or Range.	Name of reserve.	Year of formation.	Area on 1st April 1880.	Area planted with teak during the year.	Cost up to 1879-80.		Cost during 1880-81.		Total cost.	Average cost per acre up to 1880-81.	Area on 31st March 1881.
					Original cost.	Maintenance.	Original cost.	Maintenance			
			Acres.	Acres.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Acres.
WEST SALWEEN	Sinzweh	1869-70 ...	384	*432	2,670 1 5	1,108 8 2	535 9 11	546 4 8	4,860 8 2	5 15 3	816
	Wamoo	1877-78 ...	3	5	5 0 0	7 0 0	5 10 0	6 0 0	23 10 0	2 15 3	8
	Kahecloo	1879-80 ...	13	10	99 8 4	.....	47 9 5	43 12 0	130 13 9	5 11 0	23
	Oankangyee	1877-78 ...	16	9	133 11 2	27 10 0	39 1 0	78 10 0	279 0 2	11 2 6	25
	Beelakaikyee	1877-78 ...	13	9	111 3 1	34 0 0	20 12 0	.....	165 15 1	7 8 8	23
	Mehnanweh	1877-78 ...	23	46	68 9 6	78 1 6	179 3 3	10 8 0	336 6 3	4 14 0	69
	Mehwaing	1878-79 ...	67	40	154 6 4	42 7 7	218 8 6	12 8 0	427 14 5	3 15 11	107
ATTARAN ...	Dalee	1877-78 ...	46	.....	41 0 0	171 4 0	.....	13 0 0	225 4 0	4 14 4	46
	Total Tenasserim ...	.....	565	551	3,223 7 10	1,468 15 3	1,046 6 1	710 10 8	6,449 7 10	5 12 5	1,116
PROME ...	Choungzouk	1879-80 ...	67	.....	303 5 6	.....	.....	453 8 0	.....	.....	.....
		1880-81 ...	.....	132	.....	.....	399 0 0	.....	.....	.....	.....
	Total Prome ...	.....	67	132	303 5 6	.....	399 0 0	453 8 0	1,156 13 6	5 12 11	199
THARRAWADDY ...	Bwet	1875-76 ...	37·25	.....	1,466 12 0	356 8 0	.....	.....	.....	.....	.....
		1876-77 ...	50·	.....							
		1877-78 ...	44·	.....							
		1878-79 ...	150·	.....							
		1880-81 ...	.....	18·93	.....	.....	146 11 0	51 8 0	.....	.....	.....
		.....	281·25	18·93	1,466 12 0	356 8 0	146 11 0	51 8 0	2,021 7 0	6 11 8	300·18
	Shwaylay Yoma	1875-76 ...	11·25	.....	76 2 6	.....	.....	.....	76 2 6	6 12 3	(Failure) 11·25
	Nyanlay...	1878-79 ...	1	.....	102 9 2	.....	.....	.....	.....	.....	.....
		1879-80 ...	8	.....							
		1880-81 ...	.....	28·31	.....	.....	301 5 0	35 9 3	.....	.....	.....
		.....	9	28·31	102 9 2	.....	301 5 0	35 9 3	439 7 5	11 12 5	57 31
	Toungnyo Yoma	1875-76 ...	15·25	.....	134 10 3	59 8 0	.....	.....	194 2 3	12 11 8	(Failure) 15·25
	Thitcho	1869-70 ...	7	.....	70 0 0	.....	.....	.....	70 0 0	.....	Unsatisfactory
		1870-71 ...	8								
		.....	15	.....	70 0 0	.....	.....	.....	70 0 0	4 10 8	15

Gwaydouksan	1875-76 ...	10·75	.....	220 9 6	160 8 0	.....	.....	.....	.....	.....	
	1876-77 ...	8·87	.....								
	1878-79 ...	7·5	.....								
	1880-81 ...	.....	15·5	.....	.....	199 13 0	19 7 9	.....	.....	.....	
	.....	27·12	15·5	220 9 6	160 8 0	199 13 0	19 7 9	600 6 3	14 1 4	42·62	
Minbobobin	1875-76 ...	15·25	.....	117 14 3	10 0 0	.....	.....	127 14 3	8 6 2	(Failure)15·25	
Choungwa	1869-70 ...	17·	.....	1,165 10 0	348 15 1	.....	.....	.....	.....	.....	
	1873-74 ...	4·25	.....								
	1874-75 ...	30·25	.....								
	1876-77 ...	30·25	.....								
	1877-78 ...	25·	.....								
	1878-79 ...	25·5	.....								
	1879-80 ...	18·1	.....								
	.....	150·35	.....	1,165 10 0	348 15 1	.....	.....	1,514 9 1	10 1 2	150·35	
Kangyee...	1878-79 ...	54·25	.....	1,102 11 8	.....	.....	.... .	1,472 4 2	.....	.....	
	1879-80 ...	65·25	.....								
	1880-81 ...	.....	57·91	.....	107 14 2	384 11 0	261 10 4	384 11 0	.....	.....	
	.....	119·50	57·91	1,102 11 8	107 14 2	384 11 0	261 10 4	1,856 15 2	10 7 5	177·41	
Tounggamone Minhla ...	1873-74 ...	45·5	.....	2,299 0 8	2,207 11 0	.....	.....	.....	.....	.....	
	1874-75 ...	80·75	.....								
	1875-76 ...	105·55	.....								
	.....	231·80	.....	2,299 0 8	2,207 11 0	.....	.....	4,506 11 8	19 7 0	231·80	
Mokeka Beelin	1875-76 ...	37·75	.....	6,088 7 8	2,606 15 2	.....	.....	.....	.....	.....	
	1675-76 ...	4·	.....								
	1869-70 ...	10·	.....								
	1870-71 ...	12·	.....								
	1871-72 ...	27·	.....								
	1873-74 ...	159·38	.....								
	1874-75 ...	157·	.....								
	1875-76 ...	28·75	.....								
	1876-77 ...	155·	.....								
	1877-78 ...	96·	.....								
	1878-79 ...	102·25	.....								
	1879-80 ...	65·5	.....								
	1880-81 ...	.....	173·73	... ..	.. ...	1,363 0 0	433 10 0	.. ...	.....	.....	
	.....	874·63	173·73	6,088 7 8	2,606 15 2	1,363 0 0	433 10 0	10,392 0 10	9 14 7	1,048·36	
Koon Beelin	1879-80 ...	41·	.....	348 4 6	.....	.....	94 12 0	.....	.....	.....	
	1880-81 ...	.....	95	.....	.....	362 0 0		.....	.....	.....	
	.....	41·	95	348 4 6	.....	362 0 0	94 12 0	805 0 6	5 14 8	136·	
Thonezeh	1875-76 ...	18·93	.....	.. ...	.....	.....	.....	.....	.....	.....	
	1877-78 ...	38·	.....								
	1878-79 ...	34·5	.....								
	.....	91·43	.....	505 7 8	379 10 0	.....	107 0 0	992 1 8	10 13 7	91·43	
Total Tharrawaddy	.....	1,882·83	389·38	13,698 3 10	6,237 9 5	2,657 8 0	1,003 9 4	23,596 14 7	10 6 2	2,272·21	
Total Pegu circle ...	.....	1,949·63	521·38	14,001 9 4	6,237 9 5	3,056 8 0	1,457 1 4	24,752 12 1	12 11 2	2,471·21	
Add Tenasserim circle ...	.....	565·	551·	3,223 7 10	1,468 15 3	1,046 6 1	710 10 8	6,449 7 10	5 12 5	1116	
GRAND TOTAL BRITISH BURMA	.....	2,514·63	1,072·38	17,225 1 2	7,706 8 8	4,102 14 1	2,167 13 0	31,202 3 11	8 1 1	3,587·21	

* This includes 356 acres of the previous year not yet paid for.

FORM No. 47.—*Area of forest tract protected from fire during the dry season of 1881 to accompany report for 1880-81.*

Division.	Forest tract.	Up to June 1880.		During dry season 1881.				Total cost up to 31st May 1881	Year when commenced.	Remarks.
		Area actually protected.	Cost up to 10th June 1880.	Area attempted.	Failure.	Actually protected.	Amount expended.			
			Rs. A. P.				Rs. A. P.	Rs. A. P.		
West Salween.	Sinzweh	8,960	2,259 14 6	8,960	500	8,460	1,135 12 8	3,395 11 2	1871	
	Wamoo	1,920	30 0 0	1,920	1,280	640	9 0 0	39 0 0	...	
	Kaheeloo	1,280	80 0 0	1,280	400	880	20 0 0	100 0 0	1878	
	Mehwaing	8,320	135 8 0	8,320	...	8,320	23 0 0	148 8 0	...	
	Mehnanweh	3,840	6 0 0	3,840	...	3,840	3 0 0	9 0 0	1878	
	Onekangyee	4,160	468 15 0	5,120	320	4,800	41 0 0	509 15 0	1877	
	Tagehloung	...		...	...	...	.....			
	Beelakatgyee	3,000		...	...	...	.....			
Ataran ...	Dalee	11	60 0 0	800	770	30	68 8 0	128 8 0	...	
	Kyoon choung	10,850	125 0 0	9,600	530	9,070	233 8 0	358 8 0	1880	
	Total Tenasserim circle ...	42,241	3,155 5 6	39,840	3,800	36,040	1,533 12 8	4,689 2 2	...	

	Rs. A. P.
Charged in previous years .	687 15 0
Do. do. 1878-79 ...	968 9 0
Do. do. 1879-80 .	1,298 13 6
Do. do. 1880-81 ..	1,533 12 8
Total .	4,689 2 2

FORM No. 47.—*Area of forest tracts protected from fire during the dry season of 1881 to accompany report for 1880-81*—concluded.

DIVISION.	FOREST TRACTS	UP TO 1ST JUNE 1880.		DURING DRY SEASON 1881.				TOTAL COST UP TO 30TH JUNE 1881.	YEAR WHEN COMMENCED.	REMARKS.
		Area actually protected.	Cost up to 1st June 1880.	Area attempted	Failure.	Actually protected.	Amount expended.			
			Rs A. P.				Rs A. P.	Rs. A. P.		
THARRAWADDY	Mokeka Beelin reserve	24,242	11,202 0 0	24,260	12,130	12,130	1,015 0 0	12,217 0 0	1873	
	Bobin	597	2,932 0 0	614	.	614	225 0 0	3,157 0 0	1869	
	Myodwin	40	457 0 0	40		40	43 0 0	500 0 0		
	Bwet	2,886	3,309 0 0	2,886	2,586	300	643 0 0	3,952 0 0	1877	
	Kangyee	3,801	6,079 0 0	3,801	234½	3,566½	1,061 0 0	7,140 0 0	...	
	Nyanleh	5,340	8,783 0 0	5,840	425	5,415	987 0 0	9,770 0 0	...	
	Thonezai	2,180	170 0 0	2,180	...	2,180	120 0 0	290 0 0	...	
	Mokeka	32	100 0 0	38	...	38	50 0 0	150 0 0	...	
	Minhla	232	585 0 0	232	34	198	235 0 0	820 0 0	...	
	Gwaydouksan	26	87 0 0	26	..	26	83 0 0	170 0 0	...	
RANGOON	Magayee plantation	1,306	16,324 0 0	1,455	...	1,455	1,715 0 0	18,038 0 0	1872	A sum of Rs 2,094 expended last year on the Magayee reserve was inadvertently omitted and has now been included.
	Do. reserve	1,476		1,686	2	1,684				
	Kyetpyoogan	663	1,747 0 0	683	.	683	1,096 0 0	2,843 0 0	1868	
PROME	Teak plantation	75	5,352 0 0	75	40	35	24 0 0	6,313 0 0	1875	
	Gwaycho reserve				...		....			
	Choungzouk do.	2,150		3,362	3½	3,358½	937 0 0		1879	
TOUNGOO	Pyoon stream	3,440	3,536 0 0	3,440	5	3,435	*580 0 0	4,116 0 0	1877	*Extra fire-paths on account of coffee plantation.
	Yaneh	5,760	1,903 0 0	5,760	100	5,660	229 0 0	2,132 0 0		
	Total Pegu circle	54,172	62,565 0 0	56,378	15,560	40,818	9,043 0 0	77,608 0 0		
	Add Tenasserim circle	42,241	3,155 5 6	39,840	3,800	36,040	1,533 12 8	4,689 2 2		
	GRAND TOTAL, BRITISH BURMA	96,413	65,720 5 6	96,218	19,360	76,858	10,576 12 8	76,297 2 2		
							Charged in previous years	44,026 0 0		
							Ditto 1878-79	8,907 0 0		
							Ditto 1879-80	9,632 0 0		
							Ditto 1880-81	9,043 0 0		
							Total	71,608 0 0		

Form No. 48 [Prescribed].—*Prosecutions for breaches of forest rules for the year 1880-81.*

Forest division and civil district.	Injury to forests by fire.		Unauthorized felling or appropriation of wood and minor forest produce.		Grazing without permission or in tracts in which grazing is prohibited.		Other offences.		Total.				Remarks.
									Prosecutions.		Convictions.		
	Cases.	Persons.	Cases.	Persons.	Cases	Persons.	Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
Amherst district—													
Kado	.....	.....	.....	.....	.....	.....	78	99	78	99	68	86	Exclusive of two cases and five persons transferred to the Court of the Town and District Magistrates.
West Salween	1	1	.....	.....	.....	.....	1	7	2	8	2	8	
Ataran	.....	.....	.....	.....	.....	.....	1	6	1	6	1	6	
Tavoy district—													
South Tenasserim	.....	.....	4	6	.....	.....	1	1	5	7	3	4	
Total Tenasserim circle	1	1	4	6	.....	.....	81	113	86	120	74	104	
Tharrawaddy division—													
Tharrawaddy	.....	.....	1	4	.....	.....	.....	.....	1	4	1	4	
Prome	.....	.....	1	3	.....	.....	.....	.....	1	3	1	3	
Tharrawaddy	.....	.....	1	1	.....	.....	.....	.....	1	1	1	1	
Total	.....	.....	3	8	.....	.....	.....	.....	3	8	3	8	
Shwaygyin division—													
Shwaygyin civil district	.....	.....	1	6	.....	.....	1	3	2	9	2	9	
Total	.....	.....	1	6	.....	.....	1	3	2	9	2	9	

Thayetmyo civil district—												
Myaydeh township	.....	.....	3	4	.....	.....	.....	.....	3	4	3	4
Kama do.	.....	.....	5	16	.....	.....	.....	.....	5	16	4	16
Prome civil district—												
Shwaylay township	.....	.....	1	2	.....	.....	.....	.....	1	2	1	1
Mahathaman	.....	.....	2	3	.....	.....	.....	.....	2	3	2	3
Total ...	.....	.....	11	27	.....	.....	.....	.....	11	27	10	24
Western division—												
Henzada, Bassein, and Thonegwa districts	.....	.....	8	8	.....	.....	2	2	10	10	4	4
Total ...	.....	.....	8	8	.....	.....	2	2	10	10	4	4
Rangoon division	.....	.....	2	2	.....	.....	4	5	2	2	2	2
Total ...	.....	.....	2	2	.....	.....	4	5	2	2	2	2
Total Pegu circle ...	.....	.....	25	51	.....	.....	7	10	28	56	21	47
GRAND TOTAL ...	1	1	29	57	.....	.....	88	123	114	176	95	151

FORM No. 49.—[PRESCRIBED.]—*Summary of revenue of the different divisions for 1880-81.*

Budget Heads.	Agency Division.	Rangoon Division.	Thayrrawaddy Division.	Prome Division.	Western Division.	Toungoo Division.	Shwaygyin Division.	Arakan Division.	Total Pegu Circle.	Salween Division.	Kado Revenue Division.	South Tenasserim Division.	Total Tenasserim Circle.	Grand Total, British Burma.
RECEIPTS.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.		Rs. A. P.	Rs. A. P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—														
a Timber	6,37,565 13 1	.....	.....	2,504 8 0	4,791 14 11	912 0 0	200 0 0	.....	6,45,974 4 0	2,12,536 1 0	.....	2,976 8 0	2,15,512 9 0	8,61,486 13 0
b Firewood and charcoal...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
c Bamboos	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
d Sandal-wood	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
e Grass and other minor produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—														
a Timber	43 12 3	23,058 4 3	27,872 6 4	10,997 14 5	8,136 6 0	3,923 11 0	4,531 0 1	.....	79,003 6 4	13,129 10 3	2,547 6 0	270 10 9	15,947 11 0	94,951 1 4
b Firewood and charcoal	.....	310 0 0	250 8 0	.....	228 8 0	64 0 0	633 0 0	.....	1,497 0 0	.....	.....	.....	.....	1,497 0 0
c Bamboos	.....	311 12 0	1,578 8 0	.....	.....	.....	.....	.....	1,890 4 0	.....	.....	.....	.....	1,890 4 0
d Grazing and fodder grass	.....	.....	78 12 0	.....	.....	.....	.....	.....	78 12 0	.....	.....	.....	.....	78 12 0
e Other minor produce	262 0 0	320 0 0	87,451 7 11	43,670 0 0	821 8 0	4,125 0 0	1,161 0 0	.....	87,710 15 11	1,242 0 0	.....	1,715 8 0	2,957 8 0	90,668 7 11
III.—CONFISCATED, DRIFT, AND WAIF WOOD	10,149 6 0	.....	674 7 6	963 6 0	7,877 0 11	9,929 9 6	12,410 8 0	.....	42,004 5 11	44 8 2	85,773 14 0	276 4 11	86,094 11 1	1,28,099 1 0
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—														
a Duty on foreign timber and other forest produce ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,25,201 2 0	.....	3,25,201 2 0	3,25,201 2 0
b Revenue from shared and private forests... ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
V.—MISCELLANEOUS—														
a Fines and forfeitures	.....	.....	460 0 0	419 14 6	10 0 0	85 0 0	80 0 0	.....	974 14 6	1,684 0 0	.....	.....	1,684 0 0	2,658 14 6
b Refunds	102 8 7	4 15 0	4 5 0	85 0 0	164 8 0	31 0 7	.....	.....	342 0 2	.....	.....	4 0 0	4 0 0	346 0 2
c Other sources	4,538 2 0	94 12 7	918 10 0	433 3 8	221 0 0	870 9 0	.....	.....	7,076 5 3	144 4 0	2,515 0 0	.....	2,659 4 0	9,735 9 3
Total receipts ...	6,52,661 4 11	24,099 11 10	30,226 0 9	58,863 14 7	22,230 13 10	19,790 14 1	18,987 8 1	....	8,06,552 4 1	2,28,780 7 5	4,16,037 0 0	5,242 13 8	6,50,060 13 1	15,16,613 1 2

A.—CONSERVANCY AND WORKS.													
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—													
a Timber	15,066 12 6	15,271 3 6 3 14 0	7 8,407 13 5	28,952 15 2	1,094 9 4	45,415 11 6	1,127 5 2	.....	1,86,266 6 9 3 14 0	1,48,976 7 0	.....	1,430 0 0	1,50,406 7 0	3,36,674 13 9 3 14 0
b Firewood and charcoal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
c Bamboos	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
d Sandal-wood	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
e Grass and other minor produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS	509 5 4	1,880 4 5	968 7 6	1,082 4 6	2,698 13 2	12 4 0	745 8 6	154 15 3	8,070 14 8	.....	.....	.....	.....	8,070 14 8
III.—CONFISCATED, DRIFT AND WALF WOOD	1,203 11 5	183 10 6	17 0 0	72 0 0	2,504 9 6	3,558 0 4	7,827 4 2	.....	15,496 3 11	1 0 0	25,512 12 1	3 0 0	25,516 12 1	40,943 0 0
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—														
a Duty on foreign timber and other forest produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
b Revenue from shared and private forests	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHAREHOLDERS IN FORESTS MANAGED BY GOVERNMENT	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
VI.—LIVE AND DEAD STOCK—														
a Purchase of cattle	8,749 7 0	1,191 10 0	1,899 18 6	878 5 4	605 7 9	2,204 10 5	572 10 4	242 10 0	16,276 10 4	1,062 10 0	.....	.....	1,062 10 0	17,341 4 4
b Feed and keep of cattle	1,176 14 1	40 0 0	128 0 0	95 0 0	79 0 0	195 0 0	.....	132 0 0	1,718 14 1	841 3 0	1,153 13 7	.....	1,995 0 7	3,410 14 8
c Plant, tools, and instruments	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
VII.—COMMUNICATIONS AND BUILDINGS—														
a Roads and bridges	16 12 0	1,277 5 11	497 0 3	.....	.....	.....	.....	.....	1,891 2 2	29 0 0	.....	.....	29 0 0	1,920 2 2
b Buildings	1,631 12 0	378 5 9	1,239 13 3	416 5 9	.....	644 6 0	550 0 0	.....	5,060 11 9	864 6 0	351 10 11	260 13 10	1,536 14 9	6,617 10 6
c Other works	105 9 6	.....	564 15 0	.....	.....	.....	.....	.....	670 8 6	12 12 0	.....	.....	12 12 0	683 4 6
VIII.—DEMARCATION, IMPROVEMENT AND EXTENSION OF FORESTS—														
a Demarcation	4,294 9 10	2,175 13 6	619 0 5	.....	.....	6,631 15 9	12 8 0	4 8 0	16,893 14 4	4,891 11 7	.....	.....	4,891 11 7	21,717 9 11
b Compensation for land and rights	.....	.....	.....	2,967 8 10	.....	.....	.....	.....	1,750 0 0	.....	.....	.....	.....	1,750 0 0
c Survey and working plans	.....	.....	.....	1,750 0 0	.....	214 8 0	.....	3 12 0	218 4 0	526 12 0	.....	.....	526 12 0	745 0 0
d Plantations	62 6 6	8,785 12 6	5,100 12 4	906 8 3	.....	.....	.....	.....	15,081 7 7	1,908 13 5	.....	.....	1,908 13 5	17,000 5 0
e Protection from fire	.....	3,006 11 10	4,489 2 9	619 0 0	.....	602 7 4	.....	100 0 0	9,107. 5 11	1,117 0 0	.....	.....	1,117 0 0	10,224 5 11
f Other works	70 5 6	.....	2,262 14 3	.....	.....	506 13 0	.....	.....	2,840 0 9	2,633 8 7	.....	.....	2,633 8 7	5,472 4 4

FORM No. 49.—[PRESCRIBED.]—*Summary of expenditure of the different divisions for 1880-81*—concluded.

Budget Heads.	Agency Division.	Rangoon Division.	Tharrawaddy Division.	Prome Division.	Western Division.	Toungoo Division.	Shwaygyin Division.	Arakan Division.	Total Pegu Circle.	Salween Division.	Kado Revenue Division.	South Tenasserim Division.	Total Tenasserim Circle.	Grand Total, British Burma.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
IX.—MISCELLANEOUS—														
a Refunds	379 4 0	.....	.....	409 12 6	139 5 8	33 0 0	.....	.....	961 6 2	.....	.....	.....	.....	961 6 2
b Law charges	.....	0 8 0	.....	88 14 0	.....	.....	.....	.....	39 6 0	18 0 0	.....	9 8 0	27 8 0	66 14 0
c Other charges	637 12 6	436 15 11	52 1 9	495 15 0	1 8 0	114 4 6	8 0 0	.....	1,745 9 8	677 9 0	.....	1,639 3 2	2,316 12 2	4,202 5 10
Total A. Conservancy and works ...	33,938 10 2	34,740 5 0	96,592 14 5	38,844 7 4	7,063 5 5	60,363 0 10	10,943 4 2	637 13 8	2,83,923 12 7	1,03,521 7 7	27,018 4 7	3,402 9 0	1,93,942 5 2	4,77,866 1 9
B.—ESTABLISHMENTS.														
I.—SALARIES—														
a Conservators...	12,000 0 0	.....	.....	.....	.....	.....	.....	.....	12,000 0 0	16,800 0 0	.....	.....	16,800 0 0	28,800 0 0
b Superior officers	6,500 0 0	9,880 0 0	10,206 0 0	7,734 1 8	5,300 0 0	10,120 0 0	2,840 0 0	4,050 0 0	56,790 1 8	20,215 2 6	3,000 0 0	.....	29,215 2 6	86,005 4 2
c Subordinate forest and depôt establishments ...	4,223 12 8	2,215 9 9	7,402 6 10	5,246 6 0	1,681 11 8	4,276 2 7	3,138 8 4	.....	28,064 11 6	5,818 5 0	2,801 0 0	.....	8,119 5 0	36,204 0 5
d Office establishments	16,885 15 11	2,075 2 6	3,003 5 4	2,198 0 6	1,307 8 8	1,639 0 0	461 7 8	.....	28,119 8 2	8,245 7 2	5,220 0 0	.....	13,465 7 2	41,584 15 4
e Deputation and special allowances	116 5 5	.....	.....	.....	.....	.....	.....	.....	116 5 5	.....	.....	.....	.....	116 5 5
II.—TRAVELLING ALLOWANCES—														
a Conservators	3,000 8 0	.....	.....	.....	.....	.....	.....	.....	3,000 8 0	1,589 8 0	.....	.....	1,589 8 0	4,590 0 0
b Superior officers	2,733 4 0	4,801 0 0	3,363 8 0	2,008 10 8	1,977 0 0	2,989 4 8	1,074 14 3	704 1 9	21,019 11 4	5,082 0 0	.....	.....	5,082 0 0	26,101 11 4
c Subordinate forest and depôt establishments ...	.....	60 13 0	65 1 11	.....	15 0 0	.....	.....	.....	140 14 11	.....	.....	.....	.....	140 14 11
d Office establishments	39 9 2	517 6 0	234 1 8	69 5 1	305 4 3	69 3 1	.....	.....	1,220 12 3	.....	.....	.....	.....	1,220 12 3
III.—CONTINGENCIES—														
a Stationery	399 4 0	0 13 6	0 6 0	.....	.....	3 0 0	.....	.....	403 7 6	.....	.....	.....	.....	403 7 6
b Carriage of tents and records	.....	98 13 6	104 8 0	.....	13 8 0	4 0 0	29 4 0	10 0 0	259 1 6	.....	.....	.....	.....	259 1 6
c Rents, rates, and taxes...	1,090 7 0	600 0 0	.....	33 11 0	.....	.....	.....	.....	1,734 2 0	613 5 0	17 14 6	.....	631 3 6	2,365 5 6
d Pay of police guards	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
e Official postage	287 15 0	72 0 6	52 1 6	50 9 0	70 8 6	69 9 0	16 5 0	21 0 0	642 0 6	134 4 0	.....	.....	134 4 0	776 4 6
f Sundries	2,950 15 9	295 13 7	202 7 0	704 4 6	66 6 0	227 2 0	72 6 0	53 12 0	4,582 4 10	1,531 2 7	70 12 0	1 0 0	1,611 14 7	6,144 3 5
Total B. Establishments ...	50,216 6 11	21,077 8 4	5,932 14 3	18,036 2 5	10,625 14 3	19,350 4 4	7,634 15 3	4,927 13 9	1,58,053 9 6	65,599 2 3	11,118 10 6	1 0 0	76,648 12 9	2,34,702 6 3
GRAND TOTAL OF EXPENDITURE ...	84,155 11 1	55,817 13 4	1,02,525 12 8	56,880 9 9	18,689 3 8	79,713 5 2	18,478 3 5	5,565 11 0	4,41,977 6 1	2,20,050 9 10	38,136 15 1	3,403 9 0	2,70,591 1 11	7,12,568 8 0

FORM No. 50 [PRESCRIBED].—*Account current of the Forest Department, British Burma, for the official year 1880-81.*

	Tenasserim	Pegu.	British Burma.		Tenasserim.	Pegu.	British Burma.
	Rs. A. P.	Rs. A. P	Rs. A. P.		Rs. A. P	Rs. A. P	Rs. A P.
To opening balance—	511 11 4	8,606 14 4	9,118 9 8	By expenditure as per annual form No 49 ...	2,70,591 1 11	4,41,977 6 1	7,12,568 8 0
„ revenue as per annual form No. 49	6,50,060 13 1	8,66,552 4 1	15,16,613 1 2	„ deposit	....	340 0 0	340 0 0
Service funds—				*Forest cash remittances, local—*			
To civil fund ordinary, Bengal	.....	65 7 9	65 7 9	By remittances to treasuries ... „ ...	5,54,807 4 1	8,39,555 14 6	13,94,453 2 7
„ Uncovenanted Service Pension Fund, Bengal	973 2 0	1,029 0 0	2,002 2 0	„ inter-divisional transfers	61 3 0	47,215 9 1	47,296 12 1
„ Military Fund, Madras	556 10 2	...	556 10 2	„ advances recoverable	27,471 0 0	2,06,372 2 9	2,33,843 2 9
„ Orphan Fund, do.	30 11 10		30 11 10	„ suspense	....	140 12 0	140 12 0
„ deposit	.....	600 0 0	600 0 0	*Account current (other Governments)—*			
Forest cash remittances (local)—				By Government of Bengal	.. ..	55 0 0	55 0 0
To forest cheques paid	2,66,462 10 9	4,37,654 12 9	7,04,117 7 6	„ „ India	53,180 15 0	.... .	53,180 15 0
„ inter-divisional transfers	81 3 0	48,261 14 1	48,343 1 1	*Inter-departmental transfers—*			
„ advances recoverable	28,733 4 0	2,08,809 3 6	2,37,542 7 6	By Public Works Department	.	12,168 3 1	12,168 3 1
„ suspense		129 12 0	129 12 0	By cinchona plantation charges .	....	4,869 9 11	4,869 9 11
Inter-departmental transfers—	..			„ Police	..	73 0 0	73 0 0
To Public Works Department	.	66 10 0	66 10 0	" Civil Department. „ Jails	9,096 8 0	13,222 13 11	22,319 5 11
" Military Department, Bengal	83 5 1	. ...	83 5 1	„ rewards for proficiency in Oriental languages .	.	1,000 0 0	1,000 0 0
" Ditto ditto, Madras	215 10 10	357 6 5	573 1 3	" Telegraph Department	. ...	288 4 6	288 4 6
" Civil Department	.	1 468 4 5	1,468 4 5	" Military Department, Madras . . .	24,104 3 0	.	24,104 3 0
" Mathematical Instrument Department	.....	19 15 0	19 15 0	" Ditto ditto Bombay	8,781 15 0	.	8,781 15 0
" Civil Department, Jails, ...	703 15 7	.	703 15 7	*Closing balance* ..	308 15 8	6,342 12 6	6,651 12 2
Total .	9,48,413 1 8	15,73,621 8 4	25,22,034 10 0	Total ..	9,48,413 1 8	15,73,621 8 4	25,22,034 10 0

ANNUAL FORM No. 51.—[PRESCRIBED.]—*Statement of Outstandings and Liabilities on Account of Contractors and Disbursers for 1880-81.*

DIVISION	DEPARTMENT DEBTOR.			DEPARTMENT CREDITOR.			BALANCE DUE.		REMARKS.
	At commencement of year	Recoveries in cash and value of supplies and work done during the year	At close of year.	At commencement of year	Payments made during year.	At close of year.	To Department (Outstandings).	By Department (Liabilities).	
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Salween Division	.....	28,262 1 0	28,262 1 0	6,597 11 0	27,471 0 0	34,068 11 0	5,806 10 0	.. ..	
South Tenasserim Division	.....	471 3 0	471 3 0	471 3 0	.....	471 3 0	.....	.....	
Total Tenasserim	.....	28,733 4 0	28,733 4 0	7,068 14 0	27,471 0 0	34,539 14 0	5,806 10 0	.....	
			Transactions adjusted under Advances "recoverable."						
Government Timber Depôt and Agency Office	.....	13,689 4 8	13,689 4 8	2,787 14 2	13,085 4 8	15,873 2 10	2,183 14 2	. ...	
Rangoon Division	.....	43,007 10 11	43,007 10 11	8,241 10 6	50,119 1 5	58,360 11 11	15,353 1 0	.....	
Tharrawaddy Division	.....	92,998 6 3	92,998 6 3	9,301 15 0	90,828 15 5	1,00,130 14 5	7,132 8 2	.....	
Prome ditto	.....	26,999 3 3	26,999 3 3	10,868 11 3	16,665 0 0	27,533 11 3	534 8 0	.....	
Western ditto	..	1,831 2 10	1,831 2 10	5,151 3 0	6,430 0 0	11,581 3 0	9,750 0 2	.. ...	
Toungoo ditto	.....	27,207 9 7	27,207 9 7	6,110 14 4	26,127 15 3	32,238 13 7	5,031 4 0	.....	
Shwaygyin ditto	.....	3,075 0 0	3,075 0 0	50 3 0	30,95 0 0	3,175 3 0	100 3 0	.....	
Arakan ditto	.....	0 14 0	0 14 0	.. ...	20 14 0	20 14 0	20 0 0	.....	
Total	.....	2,08,809 3 6	2,08,809 3 6	42,542 7 3	206,372 2 9	2,48,914 10 0	40,105 6 6	.....	
			Transactions adjusted under "Budget heads."						
Prome Division	.....	60 8 0	60 8 0	60 8 0	.....	60 8 0	.....	.....	
Total Pegu	.....	2,08,869 11 6	2,08,869 11 6	42,602 15 3	20,6372 2 9	2,48,975 2 0	40,105 6 6	... ..	
GRAND TOTAL, BRITISH BURMA	.....	2,37,602 15 6	2,37,602 15 6	49,671 13 3	2,33,843 2 9	2,83,515 0 0	45,912 0 6	.... .	

ANNUAL FORM No. 52.— [PRESCRIBED].—*Statement of outstandings on account of revenue for the year 1880-81.*

Division.	Particulars	Outstandings at commencement of year	Value of sales and other revenue during year	Total	Amount realized during year	Balance due to the department at end of year	Remarks.
		Rs. A P	Rs. A. P	Rs. A. P	Rs A P	Rs. A. P	
SALWEEN		8 781 15 0	2,19 998 8 5	2,28 780 7 5	2,28,780 7 5		
KADO			4,16 037 6 0	4,16 037 6 0	4,16,037 6 0		
SOUTH TENASSERIM			5 242 15 8	5 242 15 8	5 242 15 8		
	Total Tenasserim Circle	8 781 15 0	6,41 278 14 1	6,50 060 13 1	6,50 060 13 1		
G T D AND AGENCY OFFICE		12,426 0 0	6,49 429 4 11	6,61 855 4 11	6,52,661 4 11	9 194 0 0	
RANGOON			24,699 11 10	24 699 11 10	24,699 11 10		
THARRAWADDY			69 298 0 9	69 298 0 9	69,298 0 9		
PROME			58,863 14 7	58,863 14 7	58,863 14 7	-	
WESTERN		3,561 0 0	19 900 9 10	23 461 9 10	22,741 13 10	719 12 0	
TOUNGOO			19 790 14 1	19 790 14 1	19 790 14 1		
SHWAYGYIN			18 987 8 1	18,987 8 1	18,987 8 1		
	Total Pegu Circle	16,007 0 0	8,60,970 0 1	8 76,977 0 1	(a) 8 67 063 4 1	9 913 12 0	
	GRAND TOTAL BRITISH BURMA	24 788 15 0	15 02,248 14 2	15,27 037 13 2	15,17 124 1 2	9 913 12 0	

(a) Realization as per form No 49 — Rs. A P 8,66,552 4 1
Written off under Government order — 511 0 0
8,67,063 4 1

From public departments — Rs A. P
" private purchasers — 9,913 12 0

Form No. 52 (*a*) Forest Department, Tenasserim circle.—*Financial results of the year 1880-81.*

Division.	Timber and other produce removed from the forests by Government agency.			Other Revenue.			Formation, protection, and improvement of forests.		Total.		Remarks.
	Receipts.	Charges.		Receipts.	Charges.		Charges.		Receipts.	Charges.	
		Budget heads.	Amount.		Budget heads.	Amount.	Budget heads.	Amount.			
	Rs. A. P.		Rs. A. P.	Rs. A. P.		Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.	
Salween	.....	AI	1,48,978 7 0	.....	.....	.....	AVI	601 14 6			
	.....	AIII	1 0 0	.....	.....	.....	AVII	303 0 8			
	.....	AVI	601 14 6	.....	.....	.....	AVIII	11,136 8 7			
	.....	AVII	303 0 8	.....	AVII	303 0 8	AIX	298 8 4			
	.....	AIX	298 8 4	.....	AIX	298 8 4	.....	.....			
	.....	B	32,764 9 1	.....	B	16,382 4 7	B	16,282 4 7			
Total	2,12,536 1 0	.....	1,83,146 7 7	16,244 6 5	.....	16,982 13 7	.....	28,921 4 8	2,28,780 7 5	2,29,050 9 10	
Kado	.....	AIII	25,512 12 1	.....	.....	.....	.....	.....			
	.....	AVI	576 14 9	.....	.....	.....	AVI	576 14 10			
	.....	AVII	117 3 7	.....	AVII	117 3 7	AVII	117 3 9			
	.....	B	5,559 5 3	.....	B	2,779 10 7	B	2,779 10 8			
Total	.....	.....	31,766 3 8	4,16,037 6 0	.....	2,896 14 2	.....	3,473 13 3	4,16,037 6 0	38,136 15 1	
South Tenasserim	.....	AI	1,430 0 0	.....	.....	.....	.....	.....			
	.....	AIII	3 0 0	.....	.....	.....	.....	.....			
	.....	AVII	106 15 3	.....	AVII	106 15 3	AVII	106 15 4			
	.....	AIX	549 9 0	.....	AIX	549 9 1	AIX	549 9 1			
	.....	B	0 8 0	.....	B	0 4 0	B	0 4 0			
Total	2,976 8 0	.....	2,090 0 3	2,266 7 8	.....	656 13 4	.....	656 12 5	5,242 15 8	3,403 9 0	
Grand Total	2,15,512 9 0	.....	2,17,002 11 6	4,34,548 4 1	.....	20,536 8 1	.....	33,051 14 4	6,50,060 13 1	2,70,591 1 11	

ANNUAL FORM No. 52(*a*).—[PRESCRIBED].—*Financial Results of the year 1880-81 in the Pegu Circle, Forest Department, British Burma.*

Division.	Timber and other produce removed from the forest by Government agency.				Other revenue.			Formation, protection and improvement of forests.		Total.	
	Receipts.	Charges. Budget heads.	Charges. Amount.		Receipts.	Charges. Budget heads.	Charges. Amount.	Charges. Budget heads.	Charges. Amount.	Receipts.	Charges.
	Rs. A. P.		Rs. A. P.		Rs. A. P.				Rs. A. P.	Rs. A. P.	Rs. A. P.
Rangoon ...	...	AI	15,275 1 8								
Collected by agency ...	34,060 14 11	Agency share ...	764 7 0		24,699 11 10	AII	1,889 4 5	AVIII	13,968 5 10	58,760 10 9	.....
	.....	AIII	183 10 6		.....	Agency share ...	269 5 4	Agency share ...	2,691 14 0	....	.....
	.....	AVI, VII, and IX ...	1,141 4 10		....	AVI, VII and IX ...	1,141 4 10	AVI, VII, and IX ...	1,141 4 10	... ...	... ...
	.....	Agency share ...	420 9 4		....	Agency share ...	420 9 4	Agency share ...	420 9 4	.....	.....
	.....	BI, II, and III ...	7,025 13 6		.....	BI, II, and III ...	7,025 13 6	BI, II, and III ...	7,025 13 6	.....	.....
	.....	Agency share ...	3,587 0 1		.....	Agency share ...	2,391 5 3	Agency share ...	1,594 3 6	.....	.....
Total ...	34,060 14 11	.....	28,397 14 11		24,699 11 10	....	13,137 10 8	.....	26,842 3 0	58,760 10 9	68,377 12 7
Tharrawaddy ...	...	AI	78,497 13 5		68,623 9 3	AII	968 7 6	AVIII	12,767 12 9	... ...	.....
Collected by agency ...	4,37,130 5 5	Agency share ...	10,305 0 0		.....	AVI, VII, and IX ...	1,447 3 11	AVI, VII, and IX ...	1,447 3 11	... ...	.....
	674 7 6	AIII	17 0 0		.....	Agency share ...	2,185 10 0	Agency share ...	2,185 10 0	506,428 6 2	.....
	... ...	AVI, VII, and IX ...	1,447 3 11		.....	BI, II, and III ...	4,213 13 1	BI, II, and III ...	4,213 13 0	.....	.....
	... ...	Agency share ...	2,185 10 0		.....	Agency share ...	7,173 15 9	Agency share ...	3,587 0 0	.....	.....
	....	BI, II, and III ...	16,855 4 2		.....			... .			
	....	Agency share ...	10,761 0 3		.....			.....			
Total ...	4,37,804 12 11	.....	119,968 15 9		68,623 9 3	... ...	15,999 2 3	.....	24,201 7 8	5,06,428 6 2	1,60,159 9 8
Prome ...	2,504 8 0	AI	28,952 15 3		55,396 0 7	AII ...	1,032 4 6	AVIII	6,522 15 1	...	.....
Collected by agency ...	56,060 0 0	Agency share ...	1,711 0 0		.....	AVI, VII, and IX ...	754 12 2	AVI, VII, and IX ...	754 12 2	... ...	.....
	963 6 0	AIII ...	72 0 0		.....	Agency share ...	784 9 4	Agency share ...	784 9 4	1,14,923 14 7	... ...
	....	AVI, VII, and IX ...	754 12 3		.....	BI, II, and III ...	3,156 0 5	BI, II, and III ...	3,156 0 4	... ...	.....
	.....	Agency share ...	784 9 4		... ...	Agency share ...	2,391 5 3	Agency share ...	1,594 3 6	.....	.....
	.....	BI, II, and III ...	12,624 1 8		.....	.....	... ...	... ...	... ...	.....	.....
	.....	Agency share ...	3,587 0 1		... ...	.....	... ...	....	... ...	...	.....
Total ...	59,527 14 0	.....	48,486 6 7		55,396 0 7	.....	8,118 15 8	.....	12,812 8 5	1,14,923 14 7	69,417 14 8
Western ...	4,791 14 11	AI	1,934 9 4		9,581 14 0	AII	2,698 13 2	.....	.....	23,191 13 10	... ...
Collected by agency ...	931 0 0	Agency share ...	48 8 0		... ...	AVI, VII, and IX ...	412 10 8	.....	.....	.....	.....
	7,887 9 11	AIII	2,504 9 6		... ...	BI, II, and III ...	3,541 15 5	.....	... ...	.....	.....
	.....	AVI, VII, and IX ...	412 10 9		... ...	Agency share ...	1,195 10 7	.....	.....	.....	.....
	.....	BI, II, and III ...	7,083 14 10		.....	.....	... ...	.....	.....	... ...	.....
	.....	Agency share ...	1,793 8 0		... ...	.....	.....	.....	.....	.....	.....
Total ...	13,609 15 10	.....	13,777 12 5		9,581 14 0	.....	7,849 1 10	.....	.....	23,191 13 10	21,626 14 3

ANNUAL FORM No. 52 (a).— [PRESCRIBED].—*Financial Results of the year 1880-81 in the Pegu Circle, Forest Department, British Burma*—concluded.

DIVISION.	TIMBER AND OTHER PRODUCE REMOVED FROM THE FOREST BY GOVERNMENT AGENCY			OTHER REVENUE.			FORMATION, PROTECTION AND IMPROVEMENTS OF FORESTS		TOTAL.	
		Charges			Charges.		Charges.			
	Receipts	Budget heads	Amounts	Receipts	Budget heads	Amounts	Budget heads.	Amounts	Receipts.	Charges.
	Rs. A P		Rs A. P.	Rs. A P		Rs A. P		Rs. A P	Rs A P	Rs. A. P.
Toungoo	912 0 0	AI	45,415 11 6	8,949 4 7	AII	12 4 0	AVIII	8,045 12 1	1,29,037 10 4	
Collected by agency	1,08,703 0 0	Agency share	2,173 6 0	43 12 3	Agency share	150 0 0	Agency share	1,655 9 10		
	9,929 9 6	AIII	3,558 0 5		AVI, VII, and IX	1,110 7 0	AVI, VII, and IX	1,110 6 11		
	500 0 0	AVI, VII, and IX	1,110 7 0		Agency share	1,260 14 10	Agency share	1,260 14 10		
		Agency share	1,260 14 10		BI, II, and III	6,450 1 5	BI, II, and III	6,450 1 5		
		BI, II, and III	6,450 1 6		Agency share	2,391 5 3	Agency share	1,594 3 6		
		Agency share	3,567 0 1							
Total	1,20,044 9 6		63,535 9 4	8,993 0 10		11,375 0 6		20,117 0 7	1,29,037 10 4	95,047 10 5
Shwaygyin	200 0 0	AI	1,127 5 2	6,377 0 1	AII	745 8 6		12 8 0	24,696 0 10	
Collected by agency	5,948 8 9	Agency share	65 1 3		Agency share	150 0 0				
	12,410 0 0	AIII	7,827 4 2		AVI, VII, and IX	565 5 2				
	660 8 0	AVI, VII, and IX	565 5 2		BI, II, and III	2,544 15 9				
		BI, II and III	5,089 15 6		Agency share	1,195 10 7				
		Agency share	1,793 8 0							
Total	18,519 0 9		16,468 7 3	6,377 0 1		5,201 8 0		12 8 0	24,806 0 10	21,682 7 3
Agency	4,411 6 0	AI	99 6 3	4,902 5 7					9,313 11 7	99 6 3
Arakan					AII	154 15 3	AVIII	108 4 0		
							AVI, VII, and IX	374 10 0		
							BI, II, and III	4,927 13 9		
Total						154 15 3		5,410 11 9		5,565 11 0
GRAND TOTAL	6,67,978 9 11		2,90,754 8 6	1,78,573 10 2		61,826 6 2		89,396 7 5	8,66,552 4 1	4,41,977 6 1

ANNUAL FORM No. 55 [PRESCRIBED].—*Statement of timber and other produce brought to depôt from the different forest divisions, 1880-81.*

Division.	Forest.	Description of timber, &c.	Sawn timber.	Number of— Logs.	Number of— Cubic feet.	Total of each division. Sawn timber	Total of each division. Logs.	Cubic feet
		I.—TEAK.						
SALWEEN.	III Division ...	Teak logs ...	...	94	4,330			
	Upper Salween ...							
	Mailayoot .	} Ditto ...	...	30	810			
	Upper Salween ..							
	Thoungyin .	Teak logs and pieces ..	...	4,068	137,801			
	Doomedanee ...	Pieces and crooks ...		656	11,930			
	Hlinboay ...	Crooks ...	.	934	18,185			
	Lower Salween	Ditto ...	.	5,401	41,770			
	Pandaw ...	Ditto ...	...	574	5,468			
	Houndraw	Logs and crooks .	..	249	5,454			
	Karennee / ...	Spars ...	.	15	1,815			
						...	12,111	221,522
		II.—OTHER KINDS.						
	Dajeing ...	Thitka ...	...	99	7,836			
	Yinbine ..	Ditto ...	...	254	20,108			
	Ataran ...	Ditto ...	...	1	82			
	Salween ...	Thitkado ..	...	2	154			
	Ataran ...	Padouk ...	...	100	6,220			
	Houndraw ...	Ditto ..	...	10	570			
	Ataran ...	Ditto branches ..	...	148	588			
	Ditto ..	Pynkado .	...	212	4,254			
	Meesine ...	Ditto ...	...	1	27			
	Hlinboay ...	Ditto ...	..	50	750			
	Amherst ...	Pinlay Kanozoe ...	...	1	22	...	986	40,620
		Hardwood sleepers ...	...	...	...	...	7,999	27,644
		Total Tonnasserim	...	..	...	...	21,096	289,786
		Central Depôt, Rangoon.						
TEARRAWADDY.	Bobin ...	Teak logs ...	..	1,450				
	Thoneseh ...	.....	...	598				
	Okepo ...	... .	...	53				
	Menhla ...	. .. .	2	705				
	Gamone ...	... .	...	399				
	Beelin ...	.... .	1	806				
	Mokoka ...	.. ...	1	420				
	Munboo ...	.... .	...	545				
	Shwalay ...	.....	...	993				
	Tounyo ...	.....	..	1,856	358,346	4	7,955	358,346
RANGOON.	Pegu ...	. ....	...	...	...	...	239	11,296
TOUNGOO.	Thaing ...	.....	...	50				
	Swa ...	.....	.	133				
	Kaboung ...	.. . .	...	261				
	Koon ...	.....	..	1,111				
	Pyoo ..	.. ...	...	2	74,371	...	1,557	74,371
PROME.	Mindone .	.... .	...	20				
	Paday ...	. ..	...	5				
	Booleh ...	.. ...	...	87				
	Nawin ...	. ..	...	1,170	59,316	...	1,282	59,316
		Total Teak ...	...	...	...	4	11,033	503,331
AGENCY.	.. .	Drift teak .	2	500	22,288	2	500	22,288
		Bassein Depôt.						
WESTERN	.	Drift teak	...	453	18,836	.	453	18,836
		Total drift teak	..	..	...	2	953	41,124
		Grand Total Teak ..	.	...	...	6	11,986	544,455
		Carried over ...	...	...	...	6	33,052	834,241

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ANNUAL FORM No. 55 [PRESCRIBED].—*Statement of timber and other produce brought to depôt from the different forest divisions for 1880-81*—continued.

Division.	Forest.	Description of timber, &c.	Sawn timber.	Number of— Logs.	Number of— Cubic feet.	Total of each division. Sawn timber.	Total of each division. Logs.	Cubic feet.
		Brought forward ...	...	...	...	6	53,052	884,241
		II.—OTHER KINDS.						
		Central Depôt, Rangoon.						
RANGOON.	Pegu ...	Thitka ...	...	360	19,080			
SHWAYGYIN.	Kadat ..	Kanyin ...	...	51	4,386			
TOUNGOO.	Kaboung ..	Thitka ...	...	22	1,166			
	Swa .	Do. .	...	34	1,802			
WESTERN.	Bassein ..	Do. ...	...	38	2,014			
AGENCY.	Ditto ...	Specimen logs and scantlings. ...	1,015	70	2,008	1,015	575	30,456
		Bassein Depôt.						
WESTERN.	Bassein ..	Thitka ...	...	223	8,114			
		Thitkado ...	...	8	359	...	231	8,473
		Total other kinds ..	...	...	...	1,015	806	38,929
		Central Depôt, Rangoon.						
AGENCY.	Drift ...	Thitka .	...	54	2,862			
	Do. ..	Kanyin .	...	63	5,418			
	Do. .	Pyinma .	.	15	330	..	134	8,674
	Do. ...	All others		2	64			
		Bassein Depôt.						
WESTERN.	Drift .	In, thitkado ...	...	2	89	...	2	89
	Total drift, other kinds		...	...	...	...	136	8,763
	Grand Total ditto ...	...	.	...	...	1,015	942	47,092
	Total Pegu circle ...	.	...	...	..	1,021	12,928	502,147
	Grand Total, British Burma ...	...	...	...	...	1,021	33,994	861,033

FORM No. 55A.—[PRESCRIBED].—*Statement of timber and other produce worked out and locally desposed of in the different forest divisions 1880-81.*

DIVISION.	FOREST.	DESCRIPTION OF TIMBER, &c.	SAWN TIMBER	No. OF		TOTAL OF EACH DIVISION.		
				Logs.	Cubic feet.	Sawn timber.	Logs.	Cubic feet.
		I.—TEAK.						
Salween	III.—Division	Logs & pieces	...	90	3,740			
	Mailayoot	Do.	...	30	810			
	Thoungyeen	Do. & pieces	...	5,081	171,854			
	Doomdammee	Pieces & crooks	...	656	11,930			
	Lower Salween	Crooks	...	5,491	41,779			
	Hlinebway	Do.	...	931	13,135			
	Pandaw	Do.	...	571	5,408			
	Houndraw	Logs & crooks	...	249	5,454			
	Ataran	Pieces	...	244	4,880	.	18,349	259,050
Kado	Confiscated	Drift	...	...	...	...	5,053	144,340
South Tenasserim	Laynya	Do.	...	3	95	...	13	445
	Maleewoon	Do.	...	10	350			
Total teak	.....	.....	...	...	...	...	18,415	403,835
		II.—OTHER KINDS.						
Salween	Ataran	Padouk	...	81	2,748			
	Do.	Do. branches	...	148	588			
	Yinebin & Dajeing	Thitka	...	477	35,490			
	Do. & Salween	Thitkado	...	26	1,402			
	Ataran	Thityah	...	3	105			
	Do.	Thingan	...	18	720			
	Do.	Anan	...	1	25			
	Thoungyeen	Pine	...	1	67			
	Tavoy	Sinkozee	...	2 tons.	21			
		Hardwood sleepers	...	125	433			
		Pyinkado scantling	...	2 tons	104	...	884	41,712
South Tenasserim	Mergui	Drift thingan	...	1	275			
		Gangaw sleepers.	...	104	289	.	105	564
Total other kinds	.....	.....	..	.		.	989	42,276
Total Tenasserim	.....	.....	..	...	..	.	19,404	446,111
		I.—TEAK.						
Tharrawaddy	.....	Refuse teak	..	..	346			
		Slabs	33	...	..	33	346	6,52a
Prome	.....	Refuse teak	...	...	239	5,242		
		Teak logs	..	...	233	1,774	...	472	7,016
Toungoo	.....	Short pieces	...	...	91	1,838	...	91	1,838
Rangoon	.....	Teak logs	...	80	92	2,208	80	92	2,208
Total teak	.....	.....	...	...	...	...	113	1,001	17,586
Tharrawaddy	Drift	Teak logs	...	...	96	...	...	96	795
Toungoo	Do.	Do.	...	...	97	..		97	2,010
Prome	Do.	Do.	...	...	21	.	...	21	630
Shwaygyin	Do.	Do.	...	..	39	...	...	39	1,170
Total drift teak	.....	.....	...	...	...	...	.	253	5,505
Grand Total teak	.....	.....	...	...	...	...	113	1,254	23,091
		II.—OTHER KINDS.						
Prome	.. .	Thitya	...	...	47	1,081	.	47	1,081
Western	.....	Pyinkado	...	..	97	...			
		Thitka	.	...	195	..			
		Thitkado	..	..	8	12,000*	...	300	12,000
Rangoon	.....	Pyinma	...	...	12				
		Pyinkado	...	..	1,905	38,855	..	1,917	38,855
Total logs	. .	.. ...	...	..	...	...	1,564	51,936
Tharrawaddy	.... .	Teak trees stumps &c.	...	6,179	75,000	.	6,179	75,000
Prome	.....	Thinnings	...	...	35	..	..	85	...
		OTHER KINDS.						
Tharrawaddy	.....	Catch	...	...	1,921			
		Htoukyan	...	...	23	...	...	1,944	...
Total	.....	.....	.	..	...	...	10,158	75,000
Total Pegu circle	.....	... ..	...	...	...	113	12,976	150,027
GRAND TOTAL, BRITISH BURMA	.....	.....	...	...	...	113	32,380	596,138

Form No. 56.—*Account of timber and other produce for the year 1880-81.*

Particulars.	Tenasserim. Pieces. Number	Tenasserim. Pieces. Cubic feet.	Pegu. Pieces. Number.	Pegu. Pieces. Cubic feet.	British Burma. Pieces. Number.	British Burma. Pieces. Cubic feet.
To balance in hand at commencement of year	81,873	2,574,361	15,774	692,418	97,647	3,266,779
Teak.						
Number of teak logs brought out from the forests by contractors and Government Agency	12,111	221,522	12,589	578,197	24,700	799,719
Confiscated drift and waif logs	5,235	209,008	7,499	364,040	12,734	573,648
Scantlings	42	192	...	...	42	192
Shingles	3T.	166	...	...	3	166
Refuse teak worked out	...	...	346	6,550	346	6,550
Number transferred from Kado drift timber register	178	8,420	...	...	178	8,420
Drift logs sent from Shwaygyin to Rangoon for disposal	...	...	248	8,680	248	8,680
Number of logs entered during 1880-81	87,954	5,454,148	...	...	87,954	5,454,148
Timber worked out by purchasers	...	...	331	7,550	331	7,550
Teak trees, thinnings, &c.	...	...	8,247	75,000	8,247	75,000
Other kinds.						
Woods of other kinds	*776	36,420	2,042	81,680	2,818	118,100
Pyinkado scantlings	8T.	422	...	...	8T.	422
Padouk do.	1T.	69	...	...	1T.	69
Hardwood sleepers	7,969	27,644	...	...	7,969	27,644
Wood, drift and waif	...	...	136	5,440	136	5,440
Do., scantlings	...	...	1,015	1,728	1,015	1,728
Number of logs entered during official year 1880-81	711	31,522	...	...	711	31,522
Trees, other kinds, Sha and Htoukyan	...	...	1,944	...	1,944	...
Miscellaneous.						
Tusks	...	...	4	...	4	
Canes	...	...	32	...	32	...
Bamboos	...	...	631,400	...	631,400	...
Total	196,861	8,564,494	681,607	1,821,283	878,468	10,385,777

Particulars.	Tenasserim. Pieces. Number.	Tenasserim. Pieces. Cubic feet.	Pegu. Pieces. Number.	Pegu. Pieces. Cubic feet.	British Burma. Pieces. Number.	British Burma. Pieces. Cubic feet.
Teak.						
Number of teak logs and pieces sold during the year	18,449	405,986	19,876	891,112	38,325	1,297,098
Logs converted into scantlings	272	6,465	...	...	272	6,465
Scantlings	2T.	120	...	...	2T.	120
Shingles	3T.	166	...	...	3T.	166
Number of teak trees, thinnings, &c., sold in Tharrawaddy Proms	...	...	8,247	75,000	8,247	75,000
Number of logs cleared during 1880-81	131,453	6,572,650	...	...	131,453	6,572,650
Teak logs delivered to claimants	2,781	139,050	6,435	315,898	9,216	454,948
Number transferred to Forest Office	178	8,420	...	...	178	8,420
Used for Government purposes	69	787	6	268	75	1,055
Gone adrift	...	...	22	1,080	22	1,080
Lost during the year	...	...	4	192	4	192
Other kinds.						
Sold during the year	999	49,175	2,183	81,560	3,172	130,735
Gangaw sleepers	104	289	...	...	104	289
Pyinkado do.	12,957	44,987	...	...	12,957	44,987
Trees of other kinds	...	...	1,944	...	1,944	...
Scantlings	...	...	1,015	1,728	1,015	1,728
Pyinkado scantlings	2T.	104	...	...	2T.	104
Used for Government purposes	7	19	1	40	8	59
Number of logs cleared during 1880-81	677	29,788	...	...	677	29,788
Sleepers, rotten, struck off	...	...	316	645	316	645
In transit at close of year	...	...	141	5,640	141	5,640
Miscellaneous.						
Tusks	...	...	4	...	4	...
Canes	...	...	32	...	32	...
Bamboos	...	...	631,400	...	631,400	...
Balance in hand	28,918	1,306,488	9,961	448,120	38,899	1,754,608
Total	196,861	8,564,494	681,607	1,821,283	878,468	10,385,777

* The total number extracted was 986 as shown in form No. 55, but out of this number 210 pyinkado pieces were converted into sleepers, which were included in the 7,969 sleepers shown above.
N. B.—The total out-turn of the Tenasserim circle (consisting of 12,111, 776, and 7,969) is 20,856 and Pegu circle 12,589, 346, 331, 8,247, 2,042, 1,015 and 1,944—26,514 exclusive of Drift Timber.

FORM No. 59.—*Statement showing the revenue derived from, and expenditure incurred on, timber and other produce sold to Public Departments from depôt during the year 1880-81.*

Division.	Name of department.	Particulars of supplies.	Amount supplied.	Rate. At.	Rate. Per.	Amount of Revenue. Due.	Received.	Outstanding.	Cost to Forest Department. Timber expenses under A.I.	Quota of all other expenditure chargeable against timber, &c.	Total.	Comparison of Revenue and Expenditure. Surplus.	Deficit.	Remarks.
SALWEEN.	Gun-carriage Factory, Madras	20 logs teak	Tons Ft. In. P. 26 31 3 10	Rs. A. 90 0	Ton.	Rs. A. P. 2,396 6 0	Rs. A. P. 2,396 6 0	Rs. A. P.	Rs A. P. 3,490 10 9	Rs. A. P.	Rs. A. P. 3,490 10 9	Rs. A. P. 284 9 3	Rs. A. P.	
		6 spare teak	9 42 5 4	140 0	,,	1,378 14 0	1,378 14 0	.....						
		39 logs padouk	36 48 5 4	140 0	,,	5,175 11 0	5,175 11 0	.....	12,586 1 0	1,026 10 1	13,612 11 1	6,716 3 11	.....	
		191 do. do.	116 28 2 1	130 0	,,	15,153 4 0	15,153 4 0	.....						
		Total	190 0 4 7	. . .	,,	24,104 3 0	24,104 3 0	.....	16,076 11 9	1,026 10 1	17,103 5 10	7,000 13 2	.....	
	Jail department, British Burma, Moulmein	18 pieces thingan	14 20 0 0	5 & 14	Piece	216 0 0	216 0 0	.....						
		3 do thitya	2 5 0 0	5 & 14	,,	24 0 0	24 0 0	.....						
		2 do sinkozee	0 21 0 0	5 0	,,	10 0 0	10 0 0	.....	198 0 0	. .....	198 0 0	62 0 0	.....	
		1 piece anan	0 25 0 0	5 0	,,	5 0 0	5 0 0	.....						
		1 do pine	1 17 0 0	5 0	,,	5 0 0	5 0 0	.....						
		44 pieces teak thoungyeen	22 0 0 0	15 0	,,	660 0 0	660 0 0	.....	225 8 0	.....	225 8 0	434 8 0	.....	
		50 padouk log-ends	.....	0 12	End	37 8 0	37 8 0	.....	.....	.....	.....	37 8 0	.....	
		Total	40 38 0 0	. ....	,,	957 8 0	957 8 0	.....	423 8 0	. ... .	423 8 0	534 0 0	.....	
KADO.	Ditto, ditto	453 teak logs	373 10 0 0	From 12-0-0 to 25-0-0	Log	7,816 0 0	7,816 0 0	.....	.....	2,418 14 0	2,418 14 0	5,397 2 0	.....	
		41 pyinma logs	31 20 0 0	From 3-0-0 to 16-0-0	,,	181 0 0	181 0 0	.....	.....	181 0 0	181 0 0	.....	.....	
		3 thitkado logs	3 0 0 0	From 5-0-0 to 15 0-0	,,	35 0 0	35 0 0	.....	.....	15 5 0	15 5 0	19 11 0	.....	
		35 thitka logs	35 0 0 0	From 3-0-0 to 5-0-0	,,	107 0 0	107 0 0	.....	.....	107 0 0	107 0 0	.....	.....	
		Total	442 30 0 0	. ...	,,	8,139 0 0	8,139 0 0	.....	. ..	2,722 3 0	2,722 3 0	5,416 13 0	.....	
		Total Tenasserim	673 18 4 7	.....	,,	33,200 11 0	33,200 11 0	.....	16,500 3 9	3,748 13 1	20,249 0 10	12,951 10 2	.....	
PROME.			No. C. ft.											
	Executive Engineer	Duty on in and thitya	37 56	2 0	Ton	177 10 0	177 10 0	.....	.....	.....	.....	177 10 0	.....	
	Ditto ditto	Felling fee on in		4 8										
	Assistant Superintendent, Telegraph	Trade permits and tonnage on pyinkado	36 ...	0 4	Tree	9 0 0	9 0 0	.....	.....	.....	.....	9 0 0	.....	
			70 ...	1 0	,,	70 0 0	70 0 0	.....	.....	.....	.....	70 0 0	.....	
		Total	143 ...	.....	...	256 10 0	256 10 0	. ....	.....	.....	.....	256 10 0	.... .	
THARRAWADDY.	Sub-Assistant Superintendent, Telegraph	Pyinkado	50 ...	1 0 0	Tree	50 0 0	50 0 0	.....	.....	.....	.....	50 0 0	.....	
	Assistant Engineer, Public Works Department, Poungdeh	In	400 ...	0 4 0	,,	25 0 0	25 0 0	.....	.....	.....	.. ...	25 0 0	.....	
	Superintendent Police, Tharrawaddy	Waif teak	. 50	35 0 0	Ton	35 0 0	35 0 0	.....	.....	3 6 0	3 6 0	31 10 0	.....	
	Ditto	ditto	... 25	20 0 0	,,	10 0 0	10 0 0	.....	.....	1 11 0	1 11 0	8 5 0	.....	
	Ditto	ditto	... 40	35 0 0	,,	28 0 0	28 0 0	.....	.... .	2 11 2	2 11 2	25 4 10	.....	

FORM No. 59.—*Statement showing the revenue derived from, and expenditure incurred on, timber and produce sold to Public Departments from depôt during the year 1880-81*—concluded.

Division.	Name of department.	Particulars of supplies.	Amount supplied.	Rate. At.	Rate. Per.	Amount of Revenue. Due.	Received.	Outstanding.	Cost of Forest Department. Timber expenses under A.I.	Quota of all other expenditure chargeable against timber, &c.	Total.	Comparison of Revenue and Expenditure. Surplus.	Deficit.	Remarks.
			No. C. ft.	Rs. A. P.		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
THARRAWADDY.	Assistant Engineer, Public Works Department, Poungdeh	Pyinkado	1,400 ..	0 8 0	Tree	700 0 0	700 0 0	.....	.....	.....	.....	700 0 0	.....	
	Executive Engineer, Tharrawaddy	do.	15	0 8 0	„	7 8 0	7 8 0	.....	.....	.....	.....	7 8 0	.....	
	Ditto	do.	... 1,075	4 8 0	Ton	96 12 0	96 12 0	.....	.....	43 0 0	43 0 0	53 12 0	.....	
	Ditto	do.	... 2,250	4 8 0	„	202 8 0	202 8 0	.....	.....	90 0 0	90 0 0	112 8 0	.....	
	Ditto	do.	... 2,477·31	.....	„	222 12 0	222 12 0	.....	.....	99 1 5	99 1 5	123 10 7	.....	
	Ditto	do.	... 8,075	.....	„	726 12 0	726 12 0	.....	.....	323 0 0	323 0 0	403 12 0	.....	
	Ditto	do.	... 3,022	.....	„	272 0 4	272 0 4	.....	.....	120 14 0	120 14 0	151 2 4	.....	
	Ditto	do.	... 6,700	.....	„	603 0 0	603 0 0	.....	.....	134 0 0	134 0 0	469 0 0	.....	
	Total	...	.....	.....	...	2,979 4 4	2,979 4 4	.....	.....	817 11 7	817 11 7	2,161 8 9	.....	
WESTERN.	Jail Department, Bassein	Thitkado	8 ...	17 0 0	Ton	122 4 3	122 4 3	.....	1,438 9 4	392 6 5	1,830 15 9	833 11 2	.....	
		Kashit	195 ...	17 0 0	„	2,542 6 8	2,542 6 8	.....						
		Pyinkado	97 ...	7 0 0	Log	679 0 0	679 0 0	.....	776 0 0	17 8 0	793 8 0	...	114 8 0	
		Teak	1 92·5	35 0 0	Ton	64 3 0	64 3 0	.....	2 0 0	6 3 0	8 3 0	56 0 0	.....	
	Public Works Department, Henzada	do.	119 ...	.	„	3,057 10 2	3,057 10 2	.....	455 0 0	86 12 6	541 12 6	2,515 13 8	.....	
	Ditto ditto	Pyinkado	6 ...	7 0 0	Log	42 0 0	42 0 0	.....	.....	14 0 0	14 0 0	28 0 0	.....	
	Telegraph	do.	40 ...	4 8 0	Ton	30 12 6	30 12 6	.....	.....	17 1 7	17 1 7	13 10 11	.....	
	Total	...	466 ...	.....	...	6,538 4 7	6,538 4 7	.....	2,671 9 4	533 15 6	3,205 8 10	3,447 3 9	114 8 0	
TOUNGOO.	Executive Engineer	Teak	3 .	30 0 0	Log	90 0 0	90 0 0	.....	15 12 0	11 4 0	27 0 0	63 0 0	.....	
RANGOON.	Public Works Department, Myitkyo	Drift teak	2 141 75	30 0 0	Log	60 0 0	60 0 0	.....	7 0 0	9 9 1	16 9 1	43 6 11	.....	
	Ditto ditto	Pyinma fee & duty	5 16·63	2 0 0	Ton									
				0 4 0	Each	1 14 7	1 14 7	.....	.....	.....	.....	1 14 7	.....	
	Assistant Superintendent, Telegraph	Pyinkado	200 ...	0 11 0	Post	137 8 0	137 8 0	.....	.....	.....	.....	137 8 0	.....	
	Total	...	207 ...	.....	...	199 6 7	199 6 7	.....	7 0 0	9 9 1	16 9 1	182 13 6	.....	
	Executive Engineer, Pegu Sub-division	Teak slabs	80 ...	0 6 0	Each	30 0 0	30 0 0	.....	.....	.....	.....	30 0 0	.....	
	Assistant Engineer, 1st Railway division	Pyinkado	30 ...	0 8 0	„	15 0 0	15 0 0	.....	.....	.....	.....	15 0 0	.....	
	Executive Engineer, Rangoon division	do.	... 1,664·85	5 9 5	Ton	6,128 12 0	6,128 12 0	.....	.....	67 6 3	67 6 3	6,061 5 9	.....	
	Engineer in charge, R. & I. V. S. Railway	do.	1,205 ...	8 10 11	Each	10,462 11 0	.....	10,462 11 0	.....	1,554 3 2	1,554 3 2	8,908 7 10	.....	
	Total	...	... .	. .	...	16,636 7 9	6,173 12 0	10,462 11 0	.....	1,621 9 5	1,621 9 5	15,014 13 7	...	
	Total Pegu	...	.....	.....	...	26,700 0 6	16,237 5 6	10,462 11 0	2,694 5 4	2,994 1 7	5,688 6 11	21,126 1 7	114 8 0	
	GRAND TOTAL	...	.....	.....	...	59,900 11 6	49,438 0 6	10,462 11 0	19,194 9 1	6,742 14 8	25,937 7 9	34,077 11 9	114 8 0	
										Deduct deficit ...		114 8 0	... ...	
										Credit balance ...		33,963 3 9	.....	

FORM No. 60.—*Abstract showing the value of timber and of live and dead stock for the year 1880-81.*

Description of timber and other stock.	On hand at commencement of the year.		Received during the year.		Total.		Sold or otherwise disposed of, and lost during the year and allowance for depreciation.		On hand at the close of the year.		Cause of loss and other particulars.
	No.	Value.	No.	Value.	No.	Value.	No.	Value	No.	Value.	
		Rs. A. P.		Rs. A. P		Rs A. P.		Rs. A. P.		Rs A P	
Timber-stock	14,967	1,09,374 3 5	26,533	2,35,481 0 0	41,500	3,44,855 3 5	36,024	2,98,549 12 1	5,476	46,305 7 4	
Live-stock	2	2,600 0 0	...	.....	2	2,600 0 0	...	.....	2	2,600 0 0	
Buildings	17	12,468 13 0	2	479 12 9	19	12,948 9 9	...	.....	19	12,948 9 9	
Dead-stock	...	5,008 10 8	...	1,695 0 7	...	6,703 11 3	...	1,560 0 0	...	5,143 11 3	
Kado duty	...	75,176 12 0	...	3,10,327 8 0	..	3,85,504 4 0	...	3,27,748 8 0	...	57,755 12 0	
Total Tenasserim circle ...	...	2,04,628 7 1	...	5,47,983 5 4	...	7,52,611 12 5	...	6,27,858 4 1	...	1,24,753 8 4	
Timber-stock	15,774	3,85,560 0 0	34,397	5,61,284 0 0	50,171	9,46,844 0 0	40,190	6,90,764 0 0	9,981	2,56,080 0 0	
Live-stock	36	* 49,000 0 0	4	2,900 0 0	40	51,900 0 0	*6	9,100 0 0	34	42,800 0 0	*Died.
Buildings	39	53,580 0 0	3	1,293 0 0	42	54,873 0 0	1	2,273 0 0	41	52,600 0 0	
Dead-stock	..	17,119 0 0	...	1,092 0 0	..	18,211 0 0	...	4,911 0 0	...	13,300 0 0	
Total Pegu circle ...	...	5,05,259 0 0	...	5,66,569 0 0	...	10,71,828 0 0	...	7,07,048 0 0	...	3,64,780 0 0	
GRAND TOTAL ...	...	7,09,887 7 1	...	11,14,552 5 4	..	18,24,439 12 5	...	13,34,906 4 1	...	4,89,533 8 4	

N B.—In last year's account the animals were over-valued by Rs. 7,000. The correct value was determined when framing the Elephant return furnished to Comptroller General.

APPENDIX A.

British Burma.

Statement exhibiting the cost of feed and keep of elephants of the Forest Department for the official year 1880-81, as compared with that of the Commissariat Department for the same period.

Division.	Number of elephants at commencement of year.	Casualties during year.	Number of elephants at close of year.	Cost of feed.	Cost of keep (including gear).	Cost of medicines.	Total expenditure for the year.	Average monthly cost per animal of the Forest Department.	Average monthly cost per animal of the Commissariat Department.	Amount paid by officers for carriage elephants.	Value of labour in cash, Receipts and work performed.	Remarks.
				Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Salween	2	.....	2	887 0 0	490 0 0	94 15 0	1,471 15 0	61 5 8	34 8 4	.....	1,692 4 0	
Tharrawaddy	6 and 1 calf	1	4 and 1 calf	268 3 3	1,558 14 9	12 11 6	1,839 13 6			24 0 0	2,064 0 0	
Rangoon	3	1	6 and 1 calf	168 14 3	996 4 9	6 7 0	1,191 10 0			89 8 0	3,880 0 0	
Prome	3	1	1	91 6 0	768 7 4	18 8 0	878 5 4			72 0 0	876 0 0	
Toungoo	6	1	7	145 1 3	2,047 1 2	12 8 0	2,204 10 5			485 8 0	2,322 0 0	
Agency	14 and 1 calf	1	9	3,875 7 11	4,787 2 7	80 12 6	8,743 7 0	42 6 3	39 4 8	461 0 0	11,282 2 0	
Western	2	1	1	116 9 6	487 12 3	1 2 0	605 7 9			213 0 0	1,500 0 0	
Shwaygyin	2	.....	2	15 12 0	547 5 1	9 9 3	572 10 4			.....	808 0 0	
Arakan	.....	.....	2	29 12 0	179 12 0	33 2 0	242 10 0			.....	96 0 0	
Total Pegu circle ...	36 and 2 calves	6	32 and 2 calves	4,731 2 2	11,372 11 11	174 12 3	16,278 10 4	.....	.....	1,345 0 0	22,823 2 0	
Grand Total ...	38 and 2 calves	6	34 and 2 calves	5,618 2 2	11,862 11 11	269 11 3	17,750 9 4	.....	.....	1,345 0 0	24,520 6 0	

APPENDIX B.

British Burma.

List of buildings of which the cost exceeds Rs. 200 and for the occupation of which no rent is paid.

Division.	No.	Name of building.	Station.	Remarks
Salween ...	1	Elephant shed	Moulmein.	
	1	Paddy-shed	Do.	
East Salween ...	1	Bungalow	Kawkareit.	
	1	Rest-house	Kyain.	
West Salween ...	1	Bungalow	Papoon.	
Kado	1	Guard-house	Martaban.	
	4	Ditto	Moulmein.	
	3	Offices and two out-houses	Kado.	
	1	Lascar's house	Do.	
	1	Upper guard-house	Do.	
	1	Lower ditto	Do.	
	1	Ditto	Nantay.	
South Tenasserim ...	1	Office	Mergui.	
	1	Guard-house	Tavoy.	
		(a)—On which no rent is paid.		
Rangoon ..	1	Road bungalow	Magayee	
	1	Plantation do.	Do	
	1	Ditto	Kyetpyoogan	
	5	Revenue stations	Kayasoo, Zoungtoo, Tawlatch, Awaing, and Hlehgoo	
	1	Forest office	Pegu.	
Depot and Agency	1	Central depot office	Kommendine, Rangoon.	
	1	Overseer's quarters		
	6	Guard-houses		
	4	Mahout's house		
	1	Elephant-shed		
	1	Sensoming-shed		
Prome .. .	2	Rest-houses	Kadunngasin, Tounggalay	
Tharrawaddy ..	1	Store-house	kangyee.	
	1	First class bungalow ..	Tharrawaddy	
	9	Rest-houses	Kangyee, Juxaing, Gyobinaing, Saingalay, Bawbin, Waing, Sanyway, Kwaymakaing, and Koungloungdain	
Toungoo ...	1	Forest office	Toungoo.	
	8	Rest-houses	Pycon stream, Leebyoobin, and Tabetkway	
Shwaygyin	1	Forest office	Shwaygyin	
		(b)—On which rent is paid.		
Prome ..	1	Forest office	Prome	Rs 126-6-8 realized on account of rent
Tharrawaddy ...	1	Ditto	Pouhgdeh ..	Rs 135 realized on account of rent
	1	First class bungalow	Tharrawaddy	Rs 410-8-0 realized on account of rent

APPENDIX B.

TENASSERIM CIRCLE.

Statement of teak and padouk trees girdled and forest work done in season 1880-81.

Name and number of sections	Name of revising officer.	Forest district.	Locality.	Teak trees girdled.	Padouk trees girdled.	I class trees estimated.	TREES COUNTED BY REVISING OFFICER.		Percentage of girdled trees.	Percentage of I class trees girdled.	Creepers cut.	Young teak.	Other trees girdled	Other kinds of trees felled.
							Trees girdled.	I class trees.						
I	Mr. T. H Aplin, Assistant Conservator of Forests ...	Ataran ...	Nat choung outside Nat choung reserve	41	...	...	41	.	...	..	...	...	...	...
	Ditto ditto ...	Do. ...	Kwingalay choung and southward between the Goongyee and Nat choung reserve, east of Zammee river .	...	252	...	...	...	...	...	..	...	...	...
II	Mr. F. W. Thellusson, Assistant Conservator of Forests ...	Lower Thoungyin.	Kanoot stream within two miles of the Thoungyin river	292	...	...	292	...	...	...	...	...	...	...
			Mawkray stream, chiefly near the Thoungyin ...	248	...	...	248	...	...	.	...	...	...	...
			Near the Hteetabloo stream, Thoungyin river ..	66	...	...	66	...	..	...	...	...	...	...
			Near the Meeklo stream and along the bank of the Thoungyin and low hills	224	...	...	224	...	..	...	...	...	...	.
			Near the Hteekohaw stream not far from Booloowaay village	215	...	...	215	...	...	...	...	...	...	...
III	Mr. H. B. Ward, Assistant Conservator of Forests	Moltharouk and Upper Salween.	On bank of Salween river between the mouth of the Mehtharouk stream and Dahgwin stockade	70	...	...	7	..	...	...	...	...	...	...
			Between the Thaylabawtoo hill and Awtaw stream ...	36	...	...	3	...	...	...	...	...	...	...
			On banks of Toto stream	5	...	...	...	...	...	...	...	...	...	...
			Between the Nat stream and Kolorklo stream .	10	...	...	4	...	...	...	...	...	...	...
			On Plarkortoo hill between Awlaw stream and Teetooklo stream	60	...	...	...	...	...	...	...	...	...	..
			On banks of Mehtharouk stream between the Karlotharlo stream and Mairsawlaw stream	63	...	...	...	...	...	...	...	...	...	...
			Total ...	1,350	252	—	1,120	...	...	...	...	...	...	...

APPENDIX C.

Statement of out-turn of foreign timber, 1877-78—1880-81.

Name of forest	1877-78.				1878-79				1879-80				1880-81			
	Logs.	Tons.	Pieces.	Tons.	Logs.	Tons.	Pieces.	Tons.	Logs.	Tons.	Pieces.	Tons.	Logs.	Tons.	Pieces.	Tons
Kannee . ..	61,884	68,036	2,983	1,491	46,208	50,509	2,164	1,082	67,899	81,146	1,436	861	60,966	75,397	678	745
Kynetown	23,981	26,379	2,449	1,224	12,206	13,424	841	420	12,450	14,907	407	244	8,299	11,688	316	352
Mhinelonegyee	14,285	15,714	385	192	7,914	8,702	96	48	13,245	15,868	51	30	5,772	7,237	74	69
Thoungyin	20,239	22,213	9,153	4,576	26,706	27,398	23,771	11,885	9,663	10,099	5,088	3,052	6,192	7,978	2,639	2 311
Dagwin . .	4,918	5,409	183	91	4,400	4,723	366	183	1,072	1,202	226	135	2,413	2,992	402	321
Sittang	3,386	3,724	...	...	761	837	.	.	...	.	...	...	...	...		
Total .	128,693	141,475	15,153	7,574	98,195	105,593	27,238	13,618	104,329	123,222	7,208	4,322	83 642	105,292	4,309	3,788

APPENDIX D.

Export of teak timber from Moulmein during 1880-81.

Articles.	Countries to which exported.		Tons.	Value.
				Rs.
Teak	United Kingdom		42,233	33,44,894
	Straits Settlements		184	14,388
		Shingles No.	1,467,500	22,425
	Ceylon		2,168	1,33,214
	Mauritius		356	24,776
		Shingles No.	2,304,028	35,146
	Sumatra		832	58,142
		Shingles No.	205,700	3,060
	Cape of Good Hope		770	38,519
	Siam		½	32
	Total ..	Tons	46,503½	36,82,027
		Shingles No.	4,008,128	
	Bengal	Calcutta	21,705	12,06,847
	Do.	Sleepers	4,612½	44,512
	Do.	Shingles	194,000	2,004
	Do.	Other ports	469	25,281
	Madras	Shingles No.	3,544½	2,37,374
	Other ports		72,270	1,168
	Bombay	Railway keys No.	44,092	1,023
	Kurtachee		3,507	2,55,922
	Pondicherry		492	38,170
	Provincial ports		3,200	
		Sleepers	5,020	2,58,977
		Shingles No.	6,152,213	
	Total .	Timber	66,835½	42,76,186
		Shingles No.	6,418,488	
		Sleepers	4,612½	
		Railway keys	44,092	

Export of other kinds of wood than teak and minor forest produce from Moulmein.

Other kinds of wood	United Kingdom	5	220	
	Bengal — Calcutta	1,147	27,709	
	Bengal — Other ports	16	24	
	Bengal — Sleepers	1,693	11,136	
	Madras	80	2,000	
	Provincial ports	515	25,610	
	Total	1,763	74,308	
	And sleepers	1,693	.	
Sticklac	Bengal	374	5,893	
	Madras	49	1,050	
	Provincial	256	6,031	
	Total	679	12,974	
Gums and cutch	United Kingdom	10,778	1,70,348	
	Provincial ports	10	180	
	Total	10,788	1,70,528	
Wood oil	Madras	68	80	
	Provincial ports	41½	42	
	Total	109½	122	

APPENDIX E.

Statement showing the imports of timber and other forest produce into the ports of Moulmein during the official year 1880-81.

Articles	Denomination	Countries from which imported.	Quantity.	Value.
				Rs.
Teak	C tons.	Provincial ports	12½	864
Do	Cwt.	Bengal, Calcutta	9	25
Other timber	Tons	Provincial ports	23	857
Do	Cwt	Ditto	8,570	10,732
Gums and cutch	"	Ditto	11,068	1,77,547
Lac, stick	"	Ditto	9	370
Oil wood	Gallo.	Ditto	280	245

APPENDIX E (1) B.B.

Statement showing exports of teak timber during 1880-81 from Rangoon and Moulmein.

	Ports.	From Rangoon			From Moulmein.			Remarks.
		Logs.	Cubic tons.	Value.	Logs.	Cubic tons.	Value.	
				Rs			Rs	
To foreign ports	United Kingdom	...	16,378	11,67,479	...	42,233	33,44,894	
	Italy, Genoa	...	8	720	...	.	.	
	Cape of Good Hope	...	300	30,000	...	770	86,519	
	Egypt, Port Said	...	55	4,400	...	..	.	
	Mauritius	..	...	.	...	356	24,776	
	South America, Rio de Janeiro ..	..	3	270	.	.	.	
	Ceylon	..	1,000	74,200	...	2,168	1,38,244	
	Siam	.	.	...	...	½	32	
	Straits Settlements	...	129	9,918	.	184	14,388	
	Sumatra	.	...	...	..	852	58,142	
	Total ...	...	17,033	12,86,987	...	46,563½	36,18,995	
To Indian ports.	Bengal	...	9,075	6,44,451	...	22,174	17,22,128	
	Bombay	...	4,703	3,31,100	..	30,027	17,45,624	
	Sind	.	481	33,070	.	3,507	2,55,922	
	Madras ...	..	5,282	3,76,084	..	7,425½	3,70,044	
	British ports within the province	...	401	33,169	...	2,200	1,88,407	
	Indian ports not British—Pondicherry	...	...	.	...	492	33,170	
	Total ...	...	19,942	13,81,374	.	66,835½	89,15,955	
	Grand Total ...	...	37,875	26,68,361	..	1,13,399	75,29,950	

APPENDIX E (2) B.B.

Statement showing the exports of minor forest produce during 1880-81 from the ports of Rangoon and Moulmein.

Articles	Whither exported	From Rangoon.		From Moulmein.	
		Quantity.	Value	Quantity.	Value.
		Cwts.	Rs	Cwts.	Rs
Gums and resins—Cutch and Gambier ...	United Kingdom	135,655	17,47,270	10,778	1,70,348
	Straits Settlements	45,824	4,44,064	...	.
	Malta	1,658	23,703	..	.
	Egypt (Port Said)	22,053	3,31,329	.	
	United States (New York) ...	4,400	62,400	...	.
	Ceylon ...	380	5,468	..	
	British ports within the province of British Burma (provincial ports) ..	12,223	1,90,604	10	160
	Bengal	114,873	16,46,514	..	...
	Madras	2,922	43,499		..
	Total ...	339,997	44,04,911	10,788	1,70,508
Lac, stick	United Kingdom	71	1,775	...	
	Straits Settlements	173	3,706		
	Bengal	8,446	2,19,542	374	5,893
	Bombay	60	2,400	.	
	Madras	2,175	53,763	49	1,080
	Provincial ports	136	4,301	256	6,031
	Total	11,061	2,87,579	679	12,974
Wood-oil	United Kingdom ... Gals.	600	600	...	..
	Bengal ... .. »	979	1,220	..	...
	Madras ... »	10,857	7,129	68	80
	Provincial ports ... »	2,627	1,403	41½	42
	Total ...	14,703	10,352	1,09½	122
	Grand Total ...	365,841	47,92,842	11,576½	1,83,624

PEGU CIRCLE.

A (1).—Agency Division.

Central Timber Depôt, Rangoon.

Tables I to IV, showing the balance in hand on account of the several divisions on 1st April 1880, arrivals and disposals in 1880-81, and balance on 31st March 1881.

Balance on hand on 1st April 1880.

Table I.

Divisions.	Teak logs.	Logs, woods of other kind.	Teak sleepers.	Pyinkado sleepers.	Total.
Prome	..	15	...	.	15
Tharrawaddy	12,008	..	...	..	12,008
Rangoon	375	...	...	339	714
Toungoo	1,423	5	...	...	1,428
Shwaygyin	...	...	...	...	...
Western	...	...	..	..	...
Agency	8	...	79	...	87
Total ...	13,814	20	79	339	14,252

The balance in agency timber in agency was 8 logs or a total of 14,252.

A (2).—Arrivals.

Table II.

Divisions.	Teak logs.	Logs, woods of other kinds.	Drift timber.	Total.
Tharrawaddy ...	7,959	...	...	7,959
Rangoon	239	360	150	749
Prome	1,282	...	..	1,282
Shwaygyin	...	51	109	160
Toungoo	1,557	56	85	1,698
Henzada	..	38	113	151
Agency { Specimens 70 / Scantlings 1,015 }	...	1,085	179	1,264
Total ..	11,037	1,590	636	13,263

A (3).—Disposals.

Table III.

Divisions.	Description of timber.	Number of pieces.	Amount.
			Rs. A. P.
Tharrawaddy	Teak logs	13,556	4,36,190 5 5
Rangoon ..	Teak logs	638	24,013 6 4
	Woods of other kinds	336	9,279 12 7
	Pyinkado sleepers...	23	5 12 0
	Drift timber	35	762 0 0
	Total ...	1,032	34,060 14 11
Toungoo... ...	Teak logs	2,559	1,04,229 0 0
	Woods of other kinds	61	1,077 0 0
	Drift timber	85	1,497 0 0
	Total ...	2,705	1,07,703 0 0
Shwaygyin ...	Woods of other kinds	51	2,286 8 9
	Canes	8	8 0 0
	Drift timber	109	2,954 0 0
	Total ...	168	5,248 8 9
Prome	Teak logs	1,282	55,865 0 0
	Woods of other kinds	15	195 0 0
	Total ...	1,297	56,060 0 0

Divisions	Description of timber.	Number of pieces.	Amount.
			Rs. A. P
Western	Woods of other kinds	38	106 0 0
	Drift timber	18	525 0 0
	Total	56	931 0 0
Agency office	Woods of other kinds	70	80 0 0
	Thitka scantlings	1,015	599 0 0
	Canes	24	24 0 0
	Drift timber	96	3,038 0 0
	Sleepers, other kinds, written off	316	
	Drift timber returned to claimants	187	
	Total	1,710	3,671 0 0
	Deduct on account of canes	20,524 32	6,43,804 13 1
		20,492	6,43,804 13 1

A. (4).—Balance on hand on 31st March 1881.

Table IV.

Division.	Teak logs.	Logs, woods of other kind.	Teak sleepers.	Total
Prome	.....	.....	.....	.....
Tharrawaddy	6,411	.....	.....	6,411
Rangoon	86	.....	.....	86
Toungoo	421	.....	.....	421
Shwaygyin	.....	.....	.....	.....
Western	.....	.....	.....	.....
Agency	26	.....	79	105
Total	6,944	.....	79	7,023

B.—Pegu Circle.

	Churchill and Sims				*Clyde Sales.*		
	£	s.	d.		£	s.	d.
April	14	0	0	to	16	0	0	13	10	0
May	14	0	0	to	16	0	0	14	7	6
June	14	0	0	to	16	0	0	14	0	0
July	13	10	0	to	15	10	0	13	15	0
August	13	10	0	to	15	10	0	13	5	0
September	13	10	0	to	15	10	0	13	5	0
October	13	10	0	to	14	10	0	13	0	0
November	13	10	0	to	14	10	0	12	17	6
December	13	10	0	to	14	10	0	12	15	0
January								12	0	0
February	14	0	0	to	15	0	0	11	2	6
March	14	0	0	to	15	0	0	13	5	0

C.—Pegu Circle.

Averages of Sales at Central Depôt, Rangoon.

1880-81.		Per ton. Rs. A. P.
I Class	April	*Nil*
	May	45 5 0
	June	43 1 4
	July	36 0 0
	August	*Nil*
	September	47 7 4
	October	44 6 5
	November	47 2 10
	December	49 4 0
	January	*Nil*
	February	55 12 8
	March	53 1 3
II Class	April	*Nil*
	May	27 3 4
	June	26 9 3
	July	26 6 6
	August	25 4 8
	September	30 13 3
	October	42 1 6
	November	33 10 10
	December	35 7 7
	January	*Nil*
	February	28 9 7
	March	41 3 9

D (1).—PEGU CIRCLE.

Statement of timber brought out under permits in the Rangoon Division during the official year 1880-81.

Range.	In		Pyinma.		Pyinkado.		Kanyin.		Theegan		Ingyin.		Thitya.		Anan.		Kokeko.		Teak.	
	No.	Amount	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.	No.	Amount.
		Rs. A. P		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A P.
								Permits issued.												
Hlaing ...	4,875	1,218 12 0	421	105 4 0	143	71 8 0	220	110 0 0	15	7 8 0	38	19 0 0	36	18 0 0	...	.....	...	...	...	.....
Pounglin	9	2 4 0	713	718 4 0	47	23 8 0	318	159 0 0	38	19 0 0	...	.....		.....	...	.....	...	.....	...	.....
Pegu ...	...	.....	264	66 0 0	126	63 0 0	516	258 0 0	94	47 0 0	...	.....	...	.....	20	10 0 0	1	0 8 0	...	.....
Total ...	4,884	1,221 0 0	1,398	889 8 0	316	158 0 0	1,054	527 0 0	147	73 8 0	38	19 0 0	36	18 0 0	20	10 0 0	1	0 8 0	...	.....
								Logs extracted during the year.												
Hlaing ...	5,460	5,687 9 9	219	227 10 6	341	351 2 3	84	326 1 6	12	34 7 0	10	13 7 9	18	.....	...	.....	...	.....	16	189 0 0
Pounglin ...	...	0 12 0	186	323 14 3	30	53 4 3	99	484 14 9	27	111 12 9	...	.....	...	.....	...	.....	...	.....	252	34 6 0
Pegu ...	1	...	234	323 6 3	67	82 0 0	974	4,076 10 6	18	41 9 6	...	.....	...	.....	...	.....	...	.....	176	2,808 0 0
Total ...	5,461	5,688 5 9	639	874 15 0	438	436 6 6	1,157	4,887 10 9	57	187 13 3	10	13 7 9	18	.....	...	.....	...		444	3,031 6 0

D. (2).—*Total revenue received under IIa.*

First instalments.	Number of trees.	Revenue, first instalments.
		Rs. A. P.
In	4,884	1,221 0 0
Pyinma	1,388	349 8 0
Pyinkado	816	158 0 0
Kanyin	1,054	527 0 0
Thingan	147	73 8 0
Ingyin	38	19 0 0
Thitya	36	18 0 0
Anan	20	10 0 0
Kokeko	1	0 8 0
Total ...	7,894	2,376 8 0
Tonnage.		
In	5,461	5,688 5 9
Pyinma	630	874 15 0
Pyinkado	438	486 6 6
Kanyin	1,157	4,987 10 9
Thingan	57	187 13 8
Ingyin	10	13 7 9
Thitya	16	92 15 3
Teak	444	3,081 6 0
Pyinkado logs supplied to Executive Engineer	.....	6,128 12 0
Total ...	8,224	21,261 12 3
	....	2,376 8 0
Total Revenue ...	.... ..	23,638 4 3

TENASSERIM CIRCLE.

APPENDIX F.

Prices of teak timber per ton of 50 cubic feet during the year at the following ports.

	Home.	Bombay.		Calcutta.	
		1st class.	2nd class.	1st class.	2nd class.
April 1880 ..	£12-10 to £14-10 per ton ...	Rs. 74 per ton,	Rs. 64 per ton ...	Rs. 75 per ton,	Rs. 50 per ton
May „ ...	£12-10 to £14-10 „ .	„ 78 „	„ 68 „ ...	„ 75 „	„ 50 „
June „ ...	£12-10 to £14 „ ...	„ 83 „	„ 70 „ ...	„ 85 „	„ 65 „
July „ ...	£12-10 to £14 „ ...	„ 75 „	„ 65 „ ...	„ 75 „	„ 55 „
August „ ...	£12-10 to £14 „ ...	„ 76 „	„ 65 „ ...	„ 85 „	„ 55 „
September „ ...	£12-10 to £14 „ ...	„ 75 „	„ 64 „ ...	„ 80 „	„ 60 „
October „ ...	£12-10 to £13-10 „ ...	„ 75 „	„ 65 „ ...	„ 75 „	„ 60 „
November „ ...	£12-10 to £13-10 „ ..	„ 70 „	„ 64 „ ...	„ 80 „	„ 57 „
December „ ...	£13 to £14 „ ...	„ 70 „	„ 64 „ ...	„ 65 „	„ 55 „
January 1881 ...	£13 to £14 „	„ 72 „	„ 64 „ ...	„ 70 „	„ 60 „
February „ ...	£13-10 to £14-10 „ ...	„ 70 „	„ 64 „ ...	„ 70 „	„ 60 „
March „ ...	£13-10 to £14-10 „ ...	„ 72 „	„ 66 „ ...	„ 70 „	„ 55 „

D. 3.—*Statement showing timber, &c., passed at revenue-stations in the Rangoon division free of duty during the official year 1880-81.*

Sub-division.	Minor forest produce.							Unreserved woods.																			
	Bamboos	Saloo.	Thitkeh.	Tounga.	Thin.	Shaw.	Canes.	Boodalet.	Zinlyoon.	Hinka.	Salkohee.	Kyoungdouk.	Petwoon.	Hlawnee.	Ngoo.	Toln.	Yona.	Oukohinza.	Mu Oo.	Toukyan.	Toungaingya.	Hnuw.	Myoukhan.	Ouchnalh.	Lein.	Linyaw.	Mahlwa.
Hlaing	2,10,575	...	...	...	...	...	...	...	...	196	...	...	70	...	...	2,674	8	...	...	37	...	...	...	...	28	...	...
Poungin	3,60,792	695	...	...	50	2,150	5,550	20	1,396	660	15	15	69	10	...	438	23	331	121	5	...	30	63	2	120	505	..
Pegu	2,270,955	6,64,990	66,900	16,400	...	4,520	1,396	...	1,276	963	238	...	633	253	260	351	...	1,010	200	6	569	...	35	14	89	289	60
Total	2,842,322	6,66,685	66,900	16,4 0	50	6,670	6,946	20	2,672	1,819	253	15	772	243	260	3,463	31	1,341	321	48	569	30	98	16	237	794	60

D 3.—*Statement showing timber, &c., passed at revenue-stations in the Rangoon division, free of duty, &c.*—continued.

Sub-division	Unreserved woods—continued.																											
	Myoukloke	Banbway	Thabootkyee	Zeebyoo	Myoukago	Yamanay	Thakyaoksoung	Onedoung	Maolettan	Yindike	Sit	Touksha	Htainthay	Danoo	Thitein	Myava	Nagyee	Toungbain	Tharopie	Nalingyaw	Yahmain	Letthan	Thayet	Thabyay	Letpan	Thitya	Thitnee	Thakoot
Hlaing	.											17											3,317	163			–	
Pounglin	17	35			25	31	103	—	20	234	55	62	326	103	72	89	27	24	399	248	13	9	379	135	3	410	143	1
Pegu		46	35	54	30	9		30									60		117				382				—	
Total	17	81	35	54	55	40	103	30	20	234	55	79	326	103	72	89	87	24	516	248	13	9	4,078	298	3	410	143	1

D. 3.—*Statement showing timber, &c. passed at revenue-stations in the Rangoon division free of duty, &c.*—concluded.

Sub-division	Unreserved woods—concluded.																								Revenue-station.
	Bamaw.	Myouksaik.	Htolukula.	Mylakwin.	Monedaing.	Yeyzawa.	Mamanga.	Toungthayet.	Zawgyesoketoko.	Hoekyee.	Chinzouk.	Thabyoo.	Thapan.	Thitmagyee.	Thitnagyee.	Thalwot.	Bonoumehna.	Thalie.	Nashs.	Kyazoo.	Tonngthaleh.	Koothan.	Toungkado.	Kyetyo.	Kyolo.	Yone.	
Hlaing	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	51	Awine.
Pounglin	14	29	501	80	96	52	10	6	119	19	6	1	4	3	2	2	51	2	35	1	23	8	188	23	...	...	Hlehgoo.
Pegu	...	...	..	...	...	...	36	...	...	...	...	...	...	...	...	...	10	...	145	...	...	...	20	85	30	...	Tawlaleh.
	14	29	501	80	96	52	46	6	119	19	6	1	4	3	2	2	61	2	180	1	23	8	208	108	30	51	21,957

APPENDIX

Forest Department, British

Extract from the Forest Day-books of the Officers of the Forest Department

Name of division	Name o forest tract	Year of survey.	By whom surveyed	Number of tracts surveyed.	Trees counted					
					Teak.					
					I.	II.	III.	IV.	Stumps.	Girdled trees.
East Salween.	Between the Kyetkat and Yeaboo streams, Myawaddie and Kawkareet road.	Decr. 23rd	Major W. J. Seaton ...	1	..	...	2	...	...	...
	Between Myawaddie road and sources of Kyetkat stream.	,,	Ditto	2	1	1	41	...	...	...
	West of Oankra stream, below Maw stream	28th	Ditto ...	3	6	...	4	20	8	
	Ditto, above ditto	,,	Ditto	4	6	1	3	38	4	...
	Between Oankra and Oankraing streams below the Mowaskoo.	,,	Ditto ...	5	28	0	26	368	53	
	Between Daylaw and Pughaikee streams	29th	Ditto ...	6	5	...	9	30	...	...
	Between Pughaikee and Oankraing streams half way between the mouth of Boobaw and Pughaikee streams.	,,	Ditto	7	23	2	31	100	27	.
	East and west of Oankraing stream, three and one-third miles downward below Poopah stream.	,,	Ditto ...	8	5	...	11	68	3	...
	West of Oankraing stream between Poopahchoungwa and Taeaw stream along high road.	30th	Ditto ...	9	11	...	58	220	7	...
	Banks of Oankraing stream between Poopah choungwa and old Hootheh path.	31st	Ditto ...	10	17	...	16	120	13	.
	West Hootheh by the Thaylaw and Wakhay streams...	,,	Ditto ...	11	3	3	30	260	3	.
	Between Ongkoke and Hootheh streams near mouth of latter.	,,	Ditto ...	12	1	...	...	150	3	
	Along banks of Waklay stream tributary of Pawpee stream.	Jany. 1st	Ditto ...	13	8	...	4	70	2	..
	Along Kleur stream feeder of Pawpee stream	,,	Ditto ...	14	1	...	10	110	3	
	On ridge east of Layketee stream, feeder of Oohoo stream.	3rd	Ditto ...	15	2	...	2	140	2	
	Sources of Keekodaw stream, feeder of the Thoungyin river.	,,	Ditto ...	16	3	2	7	80	1	...
	Between mouth of Kanehloh stream and Teenooko path.	,,	Ditto ...	17	22	13	76	400	8	...
	East and west of Kanailey stream below the Meekloung road.	,,	Ditto ...	18	34	6	29	60	12	...
	Along the Khawtee stream feeder of Oohoo stream near crossing of Meekloung road.	4th	Ditto ..	19	18	1	1	90	5	.
	Along the Oohoo stream between the mouths of Kanaileypo stream and Looko stream.	5th	Ditto ...	20	90	4	7	76	18	
	Looko stream west watershed	6th	Ditto ...	21	25	11	107	908	15	...
	Waskoo west watershed North Oangkoke stream ...	,,	Ditto ...	22	10	3	10	35	5	.
	Crest of Oangkoke Teenoo hill	,,	Ditto ...	23	14	6	151	928	10	
	Pawpee Choungwa path below the Waklay stream ...	,,	Ditto ...	24	9	...	14	195	6	.
	Mawplee stream forest east of Mawlooloh stream ...	7th	Ditto ..	25	7	...	40	285	1	.
	Between the sources of the Dohlaw and Wathoo streams south of Oankraing stream.	,,	Ditto ..	26	36	8	25	100	17	..
	West of Wathoo stream to bank Oankraing stream ...	,,	Ditto ...	27	20	...	4	45	10	...
	Between the Oankra and Tablookama streams ...	8th	Ditto ...	28	0	1	86	120	21	1
	Between the sources of the Tablookama and Teetabloo streams at east base of Megla range.	,,	Ditto ...	29	20	1	17	00	8	.
	Teetabloo south watershed near southern sources ...	,,	Ditto ...	30	6	1	11	60	2	
	Mouth of the Methaway stream to mouth of the Daylaw stream.	1881	Captain C. T. Bingham, Dy. Conservator of Forests.	1	8	44	41	326	...	
	Month of the Methaway stream to the crossing of lower high road over the Hteekohaw stream.	,,	Ditto ...	2	26	39	52	103	...	.
	Boolooway village to mouth of the Winsaw stream ...	,,	Ditto ...	3	13	26	31	9	...	...
Ataran.	From camp on Mittigate stream, half mile below the Teepohwaing stream, to Kyoukkalok.		Mr. T. H. Aplin, Assistant Conservator of Forests.	1	1	1	3	...	...	2
	From Kyonkkalok to Kyouktaga		Ditto ...	2	...	...	...	...	...	.
	From junction of Krunepahdyee and Kyouktaga roads to Krunnepahdyee stream.	..	Ditto ...	3	...	...	...	...	...	
	From camp on Mittigate to where the Kannee road crosses the Mittigate stream.	...	Ditto ...	4	11	35	83	110	410	30
	From crossing of Mittigate stream by high road to where road branches off to Tannah village.	...	Ditto ...	5	...	8	70	24	2	.
	From the point arrived at by village back to Kyouktaga high road.	...	Ditto ...	6	...	10	6	18	24	7
	From Tannah village up to watershed separating Mittigate and Kodoogway streams.		Ditto ...	7	2	8	21	45	78	1
	From 232 chains on the last road through the jungle, and cut again at 138 chains on same road.		Ditto	8	2	13	4	31	37	18
	From 102 chains on the road into the jungles, and out again to same road at Teepothehdan stream.	.	Ditto ...	9	...	...	12	16	97	3
	From 280 chains from camp on the Kyouktaga road to sources of Wettokkee stream.	..	Ditto ...	10	2	6	2	40	51	1
	From sources of Wettokkee to the Teeklokaung, up the latter to road above camp.	..	Ditto ...	11	10	19	13	98	80	6

I.—

BURMA, TENASSERIM CIRCLE.

showing the number of teak trees counted during 1880-81.

IN THE SURVEY.												AREA SURVEYED.				REMARKS.
Padouk.				*Thitka.*				*Thingan.*								
I.	II.	III.	IV.	I.	II.	III.	IV.	Above six cubits.	Above four cubits.	Above two cubits.	Small.	Length of tract.	Width.	Area in acres.	Total of first three classes on 100 acres.	
												Feet.				
5	3	1	..	...	...	...	...	...	...	...	..	3,442		7·9	25	
															a114	a Padouk.
5	6	10	...	...	...	...	...	...	...	...	...	5,016		11·5	378	
															a182	a Padouk.
...	..	...	...	...	...	...	...	...	...	...	...	6,600		15·1	66	
...	.	...	...	...	...	...	...	...	...	...	...	5,273		12·1	82	
...	.	...	...	...	...	...	...	...	...	...	...	6,600		15·1	417	
...	...	...	...	...	...	...	...	...	...	...	...	2,040		0·0	243	
...	...	...	...	...	...	...	...	..	...	...	..	6,600		15·1	370	
...	...	...	...	...	...	...	...	...	...	...	...	17,424		40	40	
...	...	...	...	...	...	...	...	...	...	...	...	10,700		24	287	
...	...	...	...	...	...	...	...	...	...	...	.	13,144		27	122	
...	...	...	...	...	...	...	...	..	...	...	..	7,800		17	264	
...	...	...	...	...	...	...	...	...	...	..	...	2,200		5·0	20	
...	...	...	...	...	...	...	...	...	..	..	.	5,500		12·6	95	
...	...	...	...	...	...	...	...	...	...	...	..	4,600		10·5	104	
...	...	...	...	...	...	...	...	...	...	.	...	5,016		11·5	34	
...	...	...	...	...	...	...	...	...	...	...	..	10,032		23·0	52	
...	...	...	...	...	...	...	...	...	...	...	...	10,560		24·2	456	
...	...	...	...	...	...	...	...	...	...	...	...	3,108		7·2	986	
...	...	...	...	...	...	...	...	...	...	...	...	3,336		7·6	263	
...	...	...	...	...	...	...	...	...	...	...	...	17,424		40	92	
..	...	...	...	...	...	...	...	...	...	...	...	10,032		23·0	631	
...	...	...	...	...	...	...	...	...	...	...	...	5,016		11·5	200	
...	...	...	...	...	...	...	...	...	...	...	...	7,392		16·9	1,011	
...	...	...	...	...	...	...	...	...	...	...	...	12,144		27·8	82	
...	...	...	...	...	...	...	...	...	...	...	...	10,032		23·0	204	
...	...	...	...	...	...	...	...	...	...	...	...	6,600		15·1	450	
...	...	...	...	...	...	...	...	...	...	...	...	2,500		5·7	421	
...	...	...	...	...	...	...	...	...	...	...	...	10,032		23·0	200	
...	...	...	...	...	...	...	...	..	...	...	...	6,600		15·1	251	
..	...	...	...	...	...	...	...	...	...	...	...	6,700		15·3	117	
1	4	...	...	...	...	...	...	...	...	...	...	10,560		72·7	127	a Stumps and girdled trees not counted.
...	...	...	...	..	...	...	..	...	...	...	...	15,918		109·6	103	Along the lower high road. Straight across the forest.
...	...	...	...	...	...	...	...	...	..	...	..	22,440		154·5	45	Here the road leading along the banks of the stream; the teak is superseded in places by evergreen further in the tract is much richer
.	...	...	...	...	...	...	...	8	10	6	8	132		·36	138	
...	...	...	...	1	1	...	..	...	...	...	..	a66		·18	111	a Thitka.
...	...	...	...	...	6	8	1	...	4	...	...	a924		2·5	56	a Thitka
															922	
...	..	...	...	v.	4	3	...	1	...	...	1	a21,120		58·1	b120	a Of this 132 foot is thitka.
									3						812	
...	...	...	...	2	...	1	...	...		7	...	a924		2·5	b12	a Of this 132 ditto.
															152	
...	...	...	...	10	17	6	...	5	2	...	...	a3,828		10·5	b314	a Of this 1,980 ditto.
															100	
...	...	...	.	6	5	...	...	1	5	2	1	a11,088		30·8	b35	a Of this 264 ditto.
															202	
...	..	..	..	2	5	5	...	...	5	.	1	a3,432		9·4	b127	a Of this 132 ditto.
															110	
..	...	..	.	...	3	2	..	...	...	1	.	a3,960		10·9	b45	a Of this 132 ditto.
															62	
	...	..	.	3	9	11	...	...	...	...	...	a6,204		17·0	b135	a Of this 528 ditto.
															506	
..	..	..	.	2		5	...	...	3	7	...	a3,036		8·3	b84	a Of this 132 ditto.

b Thitka.

APPENDIX

Forest Department, British

Extract from the Forest Day-book of the Officers of the Forest Department

Name of division.	Name of forest tract	Year of survey.	By whom surveyed.	Number of tracts surveyed.	Trees counted: Teak. I.	II.	III.	IV.	Stumps.	Girdled trees.
Attaran—continued.	From 200 chains from camp down the Kyouktaga road to the Teepoyasine stream.	...	Mr. T. H. Aplin, Assistant Conservator of Forests.	12	...	1	9	13	54	...
	From Teepoyasine to Kyouktaga high road	.....	Ditto ...	13	...	2	5	21	23	1
	From 122 chains from camp down the Kyouktaga high road to the Teeleiksung stream.	.	Ditto ...	14	1	4	8	44	76	3
	From Teeleiksung stream in an east direction to road above camp.	.	Ditto ...	15	1	27	13	27	47	6
	From Tannah village to foot of hills on the east ...	.....	Ditto ...	16	4	3	3	...	14	...
	From foot of hills to 50 chains above camp on Mittigate stream.	..	Ditto ...	17	...	...	...	...	1	...
	From Kodoogway village to watershed separating Mittigate and Kodoogway streams.	. ..	Ditto ...	18	8	17	6	...	9	6
	From watershed between Mittigate and Kodoogway through jungles to Kyoukhoung high road.	.....	Ditto ...	19	...	...	...	...	...	...
	From point last arrived at to where the road branches off to the Kyouktaga road.	.... .	Ditto ...	20	...	...	...	...	...	...
	From same point to Kodoogway village, along the Kyoukhoung high road.	.....	Ditto ...	21	...	...	1	33	4	3
	From present Kodoogway village to old Kodoogway village.	.....	Ditto ...	22	14	53	15	18	74	15
	From boundary of Kyoung stream reserve to a marked tree on the old Kodoogway village road.	. ....	Ditto ...	23	...	5	3	11	2	1
	From marked tree on old Kodoogway village road through jungles to foot of hills.	.....	Ditto ...	24	4	10	7	30	10	6
	From the hills on the east to camp on Teeplamoung stream.	. ...	Ditto ...	25	1	6	19	9	26	7
	From camp on Teeplamoung through small teak patch to Tannah road.	. .	Ditto ...	26	...	1	6	25	9	5
	From 56 chains from camp on Tannah road through jungles to junction of Teeplamoung and high road.	.... .	Ditto ...	27	...	...	...	...	...	...
	From Teeplamoung stream to watershed between Kodoogway and Kyoukbya streams.	.. ...	Ditto ...	28	...	...	...	...	...	...
	A long bank of Kodoogway from where the Kyoukbya road crosses it to mouth of Teeplamoung stream.	...	Ditto ...	29	...	...	...	...	...	...
	Along a road which goes to Kyoon stream Toungwine through the Kodoogway teak forest.	.....	Ditto ...	30	..	20	42	42	7	8
	From Kodoogway and Tannah road to Kyoukhoung high road between Lopobo and Tathwa stream.	.....	Ditto ...	31	...	...	...	...	...	...
	From Kyoukhoung high road along the Quasarlee road up to the watershed.	....	Ditto ...	32	...	...	...	...	...	...
	From Kodoogway village to point on road to Toungwine (Kyoon stream).	. .	Ditto ...	33	5	35	46	43	53	6
	From Toungwine road to sources of Loopoobo stream, and from there to junction of Loopobo with Tannah road.	. ....	Ditto ...	34	...	...	...	..	...	...
	Traversing small teak patch north of Kodoogway village	.....	Ditto ...	35	1	3	3	5	21	3
	From 56 chains on road from Kodoogway to Tannah, east and out again on road.	.....	Ditto ...	36	...	...	...	...	...	...
	Through small "thitka" patch at 96 chains on Kodoogway and Tannah road.	.....	Ditto ...	37	...	...	...	...	...	...
	From 96 chains on road from Kodoogway to Tannah west to Kyoukhoung high road.	.....	Ditto ...	38	...	...	...	...	...	...
	From Kyouktaga high road to mouth of Teewappadan and then through jungles again to 318 chains on high road.	. ...	Ditto ...	39	...	11	21	29	24	3
	Down a path connecting Kyouktaga high road with Mittigate stream.	.....	Ditto ..	40	2	17	15	18	37	8
	Through "thitka" forest near sources of Toepochoung stream.	. ..	Ditto ...	41	...	...	...	...	...	...
	Through same patch of "thitka" in another direction...	.....	Ditto ...	42	...	...	...	...	...	.
	Ditto ditto ditto ditto ...	.....	Ditto ...	43	...	...	1	...	...	...
	From 271 chains from camp on the Kyouktaga high road to Teewapadan stream sources.	.....	Ditto ...	44	4	10	9	70	61	...
	From the Teewapadan stream sources to where Kannee high road crosses Teepoowin stream.	. ....	Ditto ...	45	...	...	...	...	.	...
	From the Kannee high road to camp on Teewapadan stream through jungles.	. ....	Ditto ...	46	3	3	1	3	21	.
	From camp on Teewapadan stream to camp on Teepoowin stream.	.....	Ditto ...	47	..	2	9	17	16	7
	From camp on Teepoowin stream along its bank to crossing of Kennee high road.	.....	Ditto ...	48	...	...	...	...	...	...

I.

BURMA,—TENASSERIM CIRCLE.

showing the number of teak trees counted during 1880-81.—continued.

IN THE SURVEY.												AREA SURVEYED.				
Padouk.				*Thitka.*				*Thingan.*								
I.	II.	III.	IV.	I.	II.	III.	IV.	Above six cubits.	Above four cubits.	Above two cubits.	Small.	Length of tract.	Width.	Area in acres.	Total of first three classes on 100 acres.	REMARKS.
												Feet.				
...	...	...	...	...	...	1	...	...	...	...	...	5,016		13·8	72	
...	...	...	...	...	...	...	...	...	...	...	...	1,452		4·	175	
...	...	...	...	...	...	...	...	...	...	...	...	4,224		11·6	112	
...	...	...	...	...	...	...	...	...	...	...	..	4,224		11·6	353	
...	...	...	...	1	1	2	...	6	12	19	..	b924		2·5	40	b Of this 132 feet thitka.
															a 16	
...	...	...	...	1	2	1	...	4	6	8	...	b132		·36	111	b Thitka.
...	...	...	...	16	29	40	23	1	6	1	...	b4,092		11·2	276	b Of this 2,904 feet thitka.
															a 758	
...	...	...	...	5	16	...	...	...	1	...	..	b1,320		3·6	583	b Thitka
...	...	...	...	...	...	...	...	31	24	32	...	...		...	...	
...	...	...	...	14	9	8	2	...	4	2	...	b1,716		4·7	21	b Of this 1,056 feet thitka
															a 659	
...	...	...	...	1	...	...	...	4	5	...	...	6,072		16·7	491	
...	...	...	...	...	—	...	...	1	2	...	...	990		2·7	333	
...	...	...	...	...	...	...	...	...	...	...	...	5,016		13·8	152	
...	...	...	...	2	...	...	...	...	14	5	...	b1,716		4·7	553	b Of this 132 feet thitka.
															a 425	
...	...	...	...	1	2	4	...	...	1	...	...	b1,716		4·7	148	b Do do.
															a 148	
...	...	...	..	1	...	2	...	...	..	...	...	b132		·36	83	b Thitka.
...	...	...	...	...	1	2	...	...	5	4	..	b132		·36	88	b Do.
...	...	...	...	...	...	...	...	4	...	2	2			...	...	
...	...	...	...	...	...	...	...	...	1	1	...	4,092	120 feet.	11·2	553	
...	...	...	...	8	17	19	...	...	...	...	...	b924		2·5	176	b Thitka.
...	...	...	...	...	...	...	...	...	1	...	...	...		...	...	
...	...	...	...	...	...	...	...	...	...	...	...	5,016		13·8	623	
...	...	...	...	...	...	...	...	1	1	...	...	..		...	...	
...	...	...	...	1	..	...	...	...	2	...	...	1,848		5·0	14	
															a 2	
...	...	...	..	1	...	...	...	3	...	...	...	...		...	...	
...	...	...	...	...	3	15	...	...	...	...	...	b660		1·8	100	b Thitka.
...	...	...	...	6	12	18	...	1	...	...	...	b1,056		2·9	124	b Do.
...	...	...	...	...	...	...	...	..	...	..	...	2,376		6·5	492	
...	...	...	...	...	...	4	...	...	...	...	...	b2,112		5·8	585	b Of this 132 feet thitka
															a 68	
...	...	...	...	11	95	95	16	...	...	..	...	53,036		8·8	2,421	b Thitka
...	...	...	...	10	32	30	22	...	...	...	...	b1,716		4·7	1,581	b Do.
...	...	...	...	5	2	2	2	...	...	...	...	b792		2·1	47	b Do
															a 428	
...	...	...	..	..	3	...	...	...	4	3	...	5,808		16·	1,437	b Of this 132 feet thitka
															a 187	
...	...	...	...	...	...	...	...	.	2	1	...	...		...		
...	...	...	...	...	...	1	...	...	...	1	...	3,036		8·3	84	
															a 12	
...	..	..	..	...	...	...	...	...	...	...	...	1,452		4·	275	
...	...		...	...	...	...	...	..	1	2	...	..		...	.	

a Thitka

APPENDIX

FOREST DEPARTMENT, BRITISH

Extract from the Forest Day-books of the Officers of the Forest Department

Name of division.	Name of forest tract	Year of survey	By whom surveyed.	Number of tracts surveyed.	Trees counted: Teak. I.	II.	III.	IV.	Stumps.	Girdled trees.
ATARAN—concluded.	From camp on Teepoowin to near Teepoowin mouth		Mr. T. H. Aplin, Assistant Conservator of Forests.	49	...	...		...	...	...
	From Teepoowin to mouth of Mittigate ..	...	Ditto ...	50	...	1	4	32	...	...
	From Kannee road through jungles to the Teewapadan stream.	.	Ditto ...	51	...	2	2	18	36	..
	From point on Tannah road across jungles to Teepoaingya stream for first 40 chains.	.....	Ditto ...	52	...	...	...	...	...	.
	From point on Tannah road across jungles to Teepoainggya stream, last 36 chains.	.....	Ditto	53	...	9	19	30	68	.
	From 120 chains from Tannah village on the Tannah and Kodoogway road to Mittigate stream.		Ditto ...	54	...	...	22	34	30	.
	From last point arrived at to mouth of Teepoaingya stream		Ditto ...	55	...	11	46	17	27	1
	From mouth of Teepoaingya to camp on Teepoaingya stream.	.	Ditto ...	56	...	6	7	3	50	1
	From road west of Paing Quin to mouth of the Teepowayahkra stream.		Ditto ...	57	1	4	10	53	57	...
	Back through jungle on left bank of Teepowayahkra to Tannah and Kodoogway road.	.	Ditto ..	58	...	1	2	...	6	
	Along the Natchoung and Kannee road from Kyouktaga road junction to Teepoowin watershed.	... .	Ditto ...	59	...	...	...	...	...	...
	At 222 chains from Tannah to Tannah and Kodoogway road east and make a tour through jungles.	.	Ditto	60	.	9	3	52	0	2
	At 130 chains from Tannah village on the Tannah and Kodoogway road east and make a detour		Ditto .	61	.	1	3	24	93	7
	From 76 chains from Tannah village on the Tannah and Kodoogway road east and make a detour.	.	Ditto .	62	1	3	1	1	37	3
	From Tannah village in a north direction to the Teikleiksung stream.		Ditto	63	.	7	17	32	47	...
	From last point in a west direction to the Teewapadan and down the latter to the high road.		Ditto ...	64	...	..		..	...	...
	From junction of Teekleiksung and high road in a west direction to the Teewapadan stream.		Ditto ..	65	2	13	20	46	79	2
	From point last arrived at on Teewapadan stream to high road to 229 chains from camp on Mittigate.	.	Ditto	66	3	7	7	24	43	...
	From last point to Mittigate stream and a short distance along it	...	Ditto ...	67	...	7	35	.	23	2
	From Tannah village south of the Mittigate through a small teak patch near my old camp.	...	Ditto ...	68	...	2	1	..	10	...
	From 210 chains from Mittigate camp in a south direction through the jungle to the Mittigate and back to road	.	Ditto ...	69	...	2	22	10	32	1
	From 229 chains on Kyouktaga road from Mittigate camp north and traverse the "thitka" forest	..	Ditto ...	70	...	...	...	...	...	..
					Teak not counted here although occuring.					
	From point arrived at back through the teak forest to road at 265 chains from Mittigate camp.		Ditto ...	71	2	4	1	1	11	...
	Through the "thitka" forest at the sources of the Teepochoung stream in a south-west direction	.	Ditto ..	72	.	..	...	..	...	.
	From point where Kannee high road traverses Kodoogway stream to junction with Mittigate and thence to road.	...	Ditto ...	73	.	1	12	3	5	1

I—concluded.

BURMA, TENASSERIM CIRCLE—concluded.

showing the number of teak trees counted during 1880-81—concluded.

IN THE SURVEY.												AREA SURVEYED.				
Padouk.				*Thitka.*				*Thingan.*								
I.	II.	III.	IV.	I.	II.	III.	IV.	Above six cubits.	Above four cubits.	Above two cubits.	Small.	Length of tract.	Width.	Area in acres.	Total of first three classes on 100 acres.	REMARKS.
												Feet.				
..	..	...	...	...	.		...	1	3	2	4	.	120 feet.	...	...	
...	...	...	...	.	...	.	...	...	...	...	..	264		·72	69	
...	...	...	..	2	6	1	...	...	...	...	..	*a*2,112		5·8	68 *b*155	*a* Of this 528 feet thitka.
...	...	...	...	12	43	36	15	...	..	..	...	*a*2,640		7·2	*a*1,263	*a* Thitka.
...	...	...	.	.	.	...	...	1	...	...	.	2,904		8·	350	
...	...	...	...	...	.		..	...	2	...	...	1,320		3·6	611	
...	...	...	...	...	..	...	..	.	.	...	...	1,254		3·4	1,676	
...	...	...	...	...	...	...	..	..	...	...	...	2,112		5·8	224	
..	...	...	...	...	...	...	...	...	2	...	1	3,960		10·9	187	
...	...	.		2	.	...	...	...	2	...	...	*a*720		2·	150 *b*100	*a* Of this 66 feet thitka.
...	...	...	...	7	6	3	1	...	...	..	...	*a*528		1·4	1,143	*a* Thitka.
...	...	...	.	7	2	4	...	1	.	1	.	*a*2,508		6·8	176 *b*1,011	*a* Of this 660 feet thitka.
...	...	...	...	4	4	4	...	1	..	...	...	*a*4,620		12·7	31 *b*94	*a* Do. 396 do.
...	...	...	...	1	3	3	...	...	...	...	...	*a*4,224		11·6	43 *b*60	*a* Do. 264 do.
...	...	...	...	...	...	...	...	...	...	...	...	3,564		9·8	244	
...	...	...	...	...	3	...	...	6	7	5	...	66		·18	166	*a* Thitka.
...	...	...	...	20	24	33	1	...	...	...	...	*a*8,580		24·3	144 *a*316	*a* Of this 1,320 feet thitka.
...	...	...	...	2	6	13	...	...	...	1	..	*a*4,572		13·0	130 *a*101	*a* Of this 528 feet thitka.
...	...	...	...	...	...	...	...	...	...	...	...	2,112		5·8	724	
...	...	...	...	...	...	...	...	2	...	...	...	528		1·4	214	
...	...	...	...	...	...	...	...	...	...	...	...	2,244		6·1	393	
...	...	...	...	...	16	5	...	...	...	...	...	*a*660		1·8	1,166	*a* Thitka.
...	...	..	..	..	...	...	...	...	...	...	...	1,716		4·7	148	
...	...	...	...	22	20	4	3	...	...	...	...	*a*1,452		4·	1,976	*a* Thitka.
...	...	..	...	..	...	...	...	..	...	...	...	792		2·1	1,380	

b Thitka.

PROGRESS REPORT

ON

FOREST ADMINISTRATION

IN

BRITISH BURMA

FOR

1881-82,

By Messrs. B. RIBBENTROP and H. C. HILL,

CONSERVATORS OF FORESTS,

WITH A REVIEW BY THE CHIEF COMMISSIONER, AND THE ORDERS OF THE GOVERNMENT OF INDIA.

RANGOON:

PRINTED AT THE GOVERNMENT PRESS.

—

1883.

No. 114 F., dated Fort William, the 30th January 1883.

From—A. MACKENZIE, Esq., C.S., Secretary to the Government of India, Home Department.

To—The Chief Commissioner of British Burma.

I AM directed to acknowledge the receipt of Mr. Kynoch's letter No. 480—7H. of the 20th September last, forwarding the Report of Forest Administration in British Burma for the year 1881-82, with your review thereof.

2. The area of reserved forests has, as was anticipated, been further increased during the year, the progress being as follows:—

Forest Reserves.

	Area in square miles.		
	Forest area.	Toungya area.	Total
Reserved on the 1st April 1881	2,040	248	2,288
Added during the year	836	150	986
Total on the 1st April 1882	2,876	398	3,274

This area is distributed between the two circles in the following manner:—

	Forest area.	Toungya area.	Total.
	Square miles.	Square miles.	Square miles.
Pegu Circle	2,440	398	2,838
Tenasserim Circle	436	.....	436
Total ...	2,876	398	3,274

Reservation in the Pegu Circle is far advanced, and the conclusion of the work may be expected at a comparatively early date. This will, it is hoped, make available a sufficient staff for the Tenasserim Circle, where the work is as yet in a backward state. It is satisfactory to notice that the rapid progress which has, on the whole, been effected during the last few years has been accompanied by a careful and patient enquiry into the claims of the neighbouring inhabitants in respect of forest produce and other rights, and by a liberal treatment of such claims.

3. The number of breaches of the forest rules amounts to 95, of which only 11 occurred in the reserves, while a large proportion is connected with timber in transit on the rivers. It is evident, therefore, that the measures of forest conservancy are carried out without pressing in any way on the people.

Breaches of forest rules.

4. Fire-protection has been more successful than in the previous year. Of a total area of 115,982 acres attempted, only 1,906 acres were burnt, which is at the rate of 1·6 per cent., as compared with 20 per cent. in the year 1880-81. The cost of fire-protection amounted to about 1½ annas per acre, against 2¼ annas in 1880-81. Of the 1,906 acres burnt, 347 acres were plantations of various kinds. The burning of plantations has now for some years past been a regular occurrence in British Burma; and although the Governor General in Council is

Protection from fire.

fully aware of the exceptionally great difficulties with which fire-protection has to contend in Burma, he trusts it will be possible to secure at any rate the planted areas from further damage by fire. The planting up of the boundaries with evergreen trees commends itself to the Government of India, and it should be proceeded with as rapidly as practicable, wherever the situation and the soil are favourable to the growth of such trees.

The Governor General in Council agrees with you in considering that ultimately the greater portion of the reserves must be protected from fire; but he would again deprecate any considerable extension until complete success has been achieved, for several years in succession, with the areas so far taken under protection.

Reproductive measures.

5. The progress made in planting is shewn in the following table :—

	Area planted, in acres.			Outlay, in Rupees.	
	At the beginning of the year.	Added during the year.	Total.	Total from the commencement.	Per acre.
Regular plantations ...	3,544	20	3,564	3,18,411	89
Toungya ditto ...	3,587	852	4,439	39,216	9
Total ...	7,131	872	8,003	3,57,627	45

Considering the heavy demarcation and timber works which had to be attended to during the year, the results are satisfactory.

The system of plantations carried on by departmental agency has now been abandoned for the system of toungya teak cultivation. It is understood that the average number of teak seedlings growing in the new teak toungyas at the close of the year amounted to more than 600 per acre. This, with other trees which will spring up gradually, is a sufficiently dense stocking of the ground, and, considering the low rate of expenditure per acre, the results are highly satisfactory and very creditable to the Conservators.

The Governor General in Council has read with interest the account of the planting operations on 450 acres covered with flowering bamboos in the Bwet and Nyanleh reserves of the Tharrawaddy Division. The area is said to be well stocked with seedlings, and the undertaking promises to be very successful, while the cost per acre amounts to a little under Rs. 5. I am to request that the progress of this experiment may be noticed in detail in future reports.

It is noticed that experimental cutch plantations have been made in the Bawbin and Bwet reserves, and it is hoped that it will be found practicable to propagate this important tree on a large scale at a cost proportionate to the returns which may ultimately be expected from the plantations. Hereafter the toungya system can no doubt be extended to other species.

Girdling operations.

6. The following trees were girdled during the year:—

Teak trees	18,850
Other trees	5,359
Total ...	24,209

Regarding the trees girdled in the Tenasserim Circle, some details are given in Appendix D; but in the report for the Pegu

Circle, reference is invited to a special report on the subject. I am directed to point out that, as the annual report should be a record of the operations of the year, the necessary details regarding the girdling operations in the Pegu Circle should have been given in the report.

It appears from your review that only 200 teak trees were girdled in the reserves, the remainder being obtained from the unreserved forests. The number of teak trees girdled is 2,850 in excess of Mr. Brandis' forecast. It is reported that about 30,000 trees fit for girdling remain in the unreserved forests, so that girdling operations will have to be carried on in the reserves at the end of two years.

Yield of the forests.

7. The data representing the annual yield of the forests given by the two Conservators are not always arranged on the same lines; hence it is difficult to arrive at the exact figures for the province. The following data, taken from your review, represent the outturn:—

	Timber extracted, in tons.		
	Teak.	Other timber.	Total.
By Government Agency	29,615	20,902	50,517
Under trade permits	...	23,277	23,277
Do. free permits	...	42,413	42,413
In other ways	1,631	579	2,210
Total ...	31,246	87,171	118,417

The outturn of teak is considerably larger than that of the previous year, which amounted to 22,253 tons only; while the quantity of timber of other kinds is nearly double that brought to market during the preceding year.

The number of cutch trees cut during the year is estimated at 176,000, as against 436,500 cut in the year 1880-81, and the falling off is said to be due to the supply outside the reserves being nearly exhausted. At the same time it is not impossible that the raising of the fee from Rs. 10 to Rs. 20 per cauldron may have influenced the manufacture of the article. On the whole, it seems clear that the stock of cutch trees available is not sufficient to maintain the outturn of the last few years, and a reduction in the quantity of cutch brought to market seems unavoidable, until re-production has replaced the trees lately removed from the forests.

Import and export of timber.

8. It appears that the following quantities of timber were brought into British Burma from beyond the frontier during the last five years:—

	Tons.
1877-78	208,198
1878-79	170,610
1879-80	157,260
1880-81	124,618
1881-82	154,290

These data do not permit of any conclusions being drawn as regards the further stocks of timber available beyond the frontier. The duty hitherto levied at Moulmein on foreign timber has been reduced from 7 to 1 per cent. *ad valorem* from the 1st January 1882 at the solicitation of the Moulmein timber merchants. A few months' experience seems to have shewn that the benefit of the reduction is appropriated by the owners of the timber in the foreign States, while the merchants of Moulmein have failed to realize the advantage expected from the reduction.

The export of teak timber from Rangoon and Moulmein during the year amounted to 133,751 tons, as compared with 151,274 tons in 1880-81 The figures in Appendix C (1) relating to the exports from Moulmein do not, however, agree with those given in Appendix F.

Financial Results.

9. The revenue of the year, amounting to Rs. 22,31,804, is considerably larger than that realized in any previous year. The following table exhibits the progress of revenue and expenditure during the last 10 years :—

Year.	Receipts.	Charges.	Surplus.	Proportion of surplus to receipts in per cent.
	Rs.	Rs.	Rs.	
1872-73	8,27,469	3,36,024	4,91,445	59
1873-74	10,68,621	4,74,531	5,94,090	56
1874-75	10,74,802	6,62,638	4,12,164	38
1875-76	17,79,020	8,14,750	9,64,270	54
1876-77	15,51,468	10,05,044	5,46,424	35
Average of 5 years ...	12,60,276	6,58,597	6,01,679	48
1877-78	16,03,023	8,55,816	7,47,207	47
1878-79	11,37,562	7,18,401	4,19,161	37
1879-80	11,80,190	7,53,490	4,26,700	36
1880-81	15,16,613	7,12,568	8,04,045	53
1881 82	22,31,804	11,50,222	10,81,582	48
Average of 5 years ...	15,33,838	8,38,099	6,95,730	45
Average of 10 years ...	13,97,057	7,48,348	6,48,709	46

These figures shew that the revenue is, on the whole, rising, but that the annual realizations fluctuate considerably. During the last 10 years the revenue has risen from 8 lakhs to 17 lakhs, then fallen again to 11 lakhs, and now it has risen to 22 lakhs, owing chiefly to a great rise in the price of teak, which has induced the Department to sell increased quantities of teak, and has also considerably stimulated the extraction of other timber. There seems very little doubt that the revenue will to some extent fall again with a decrease in the price of teak timber.

The average annual net revenue of the last five years is only Rs. 94,060 higher than that of the previous five years, while the average gross revenue has increased by Rs. 2,73,562. The surplus will henceforth be reduced by more than Rs. 2,00,000 per annum, owing to the reduction, from 7 to 1 per cent. *ad valorem*, of the import duty hitherto levied on foreign timber at Kadoo; but, on the other hand, it is expected that increased receipts from the British forests will make up for the loss.

10. It has been noticed that you have readily availed yourself of the opportunity which the Forest School at Dehra Dún now offers for the training of an executive staff, which must soon become the mainstay of successful forest administration, and without which permanent success cannot be achieved.

11. On the whole, excellent work has been done during the year in both circles, and the Governor General in Council has specially noticed the high praise bestowed by you upon Mr. Ribbentrop, the Conservator of the Pegu Circle, who has been transferred to the Punjab.

12. A list of the discrepancies, which have been noticed in the Statements appended to the Report, will be found in an Appendix to these orders.

Appendix showing the discrepancies noticed in the Statements appended to the Report of Forest Administration in British Burma for the year 1881-82.

FORM No. 49.

(Area of Reserved Forests.)

THE information usually recorded in the "Remarks" column regarding Karen areas in the Pegu Circle has been omitted in the case of the Toungnyo Yoma, the Minboo Bawbin, and the Okekan reserves.

FORM No. 50.

(Area of Plantations.)

THE area and cost of the Myouktoung plantation, which was not mentioned in the Statement for 1880-81, have been entered in the column "On 1st April 1881," instead of under "Added during 1881-82."

FORM No. 50A.

(Toungya Teak Plantations.)

THE area of these plantations in the Pegu Circle on the 1st April 1881 is shewn as 28 acres more than the area on the 31st March 1881 (as entered in the Report for 1880-81).

The figures in the column "Cost up to 1880-81" should represent the cost *up to* 1879-80, *and during* 1880-81; but the entries for the Tenasserim Circle under that column comprise only the cost *during* 1880-81, while the figures relating to the Pegu Circle differ from those entered in the Report for 1880-81.

The presumably correct figures under this head for the two Circles are :—

Tenasserim Circle.

		Rs.	
Up to 1879-80	... ...	4,692	
During 1880-81	... ...	1,757	
Total cost up to 1880-81	...	6,449	instead of Rs. 1,757, as in the entry under notice.

Pegu Circle.

		Rs.	
Up to 1879-80	... ...	20,239	
During 1880-81	... ...	4,514	
Total cost up to 1880-81	...	24,753	instead of Rs. 24,127, as in the entry under notice.

According to paragraph 259 of the Forest Department Code, the total cost incurred during the year on account of Plantations should agree with the amount entered under A. VIII. d. in Form No. 53 (Summary of Revenue and Expenditure); but, while Rs. 19,747 are given in the latter form as the total expenditure during 1881-82 on account of Plantations, the figures of the corresponding entries in *both* Forms Nos. 50 and 50A aggregate only Rs. 11,141.

FORM No. 53.

(Summary of Revenue and Expenditure.)

FORM No. 54.

(Account Current.)

FORM No. 55.

(Outstandings and liabilities on account of Contractors and Disbursers.)

FORM No. 56

(Outstandings on account of Revenue.)

These Forms do not bear the Comptroller General's signature, as required by paragraph 255 of the Forest Department Code.

FORM No 62

(Account of Timber and other produce cut or collected by Government agency and brought to sale depôts or sold locally.)

The balance of timber in the Tenasserim Circle at the commencement of the year is shewn as 7 pieces less than the balance at the close of the previous year

In the entries for the Tenasserim Circle under "Received from the forests in depôts," the *number* of pyingado scantlings and padouk planks should have been inserted, to correspond (*vide* paragraph 266 of the Forest Department Code) with the data recorded in Form No 60 (Timber and other produce received from forests in sale depôts)

FORM No. 65

(Value of Timber and other produce at sale depôts and of live and dead stock)

The figures representing the number on hand, at the commencement of the year, of timber stock in the Tenasserim Circle, and those representing the number and value of other stock in the Pegu Circle, do not agree with the figures entered in the Report for 1880-81 as the number and value on hand at the close of that year.

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REPORT

ON

THE FOREST ADMINISTRATION

OF

BRITISH BURMA

FOR

The year 1881-82.

RANGOON:

PRINTED AT THE GOVERNMENT PRESS.

1882.

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RESOLUTION

ON THE

FOREST ADMINISTRATION

OF

BRITISH BURMA

FOR THE YEAR 1881-82.

Extract from the Proceedings of the Chief Commissioner, British Burma, in the Forest Department,—No. 2811., dated the 11th September 1882.

READ—

Reports of Conservators on the administration of forests in the Tenasserim and Pegu circles for the year 1881-82.

RESOLUTION.—The report of the Tenasserim forest circle was received in manuscript punctually, and that of the Pegu circle a few days after the appointed time, but, owing to causes of delay which seem to be preventible and which, it is hoped, will be prevented in future, the reports, with the amalgamated statistical returns, were not received in print in a complete form till the 24th of August.

The arrangement of the present reports is a great improvement upon that of previous years, and it is now, for the most part, easy to see at a glance the results of the working of the Forest Department in its different branches. Where information in detail on special subjects or in regard to the several local divisions appears to be required the particulars are conveniently thrown into the form of an appendix. In this year's reports, however, this system has led to some repetition, which it will doubtless be possible to avoid with further experience.

2. The forest administration of 1881-82 has been actively and successfully carried on in every department. The area of reserved forest has been increased by 534,542 acres, or 836 square miles. The area of forest land successfully protected from fire has risen from 76,858 acres in the previous year to 114,076 acres, an increase of 37,218 acres. The reproduction of teak has been prosecuted, an addition of 824 acres having been made to the area planted with teak in toungyas, which now amounts to 4,439 acres, against 3,615 acres in 1880-81. Nearly the whole forest land of the province was brought under the operation of the old forest rules in 1881-82, as it is now subject to the Burma Forest Act. The number of trees of all kinds girdled in 1881-82 was 24,209, a little less than the number, 24,614, in 1880-81. The quantity of timber of all sorts extracted from the forests amounted to 118,417 tons, an increase of 46,407 tons over the quantity in the previous year, which was 72,010. The total forest revenue from all sources reached the sum of Rs. 22,31,804, being Rs. 7,15,191 in excess of the income, Rs. 15,16,613, of 1880-81. These results will be considered in detail under their respective heads.

General results of forest administration.

Forest Reservation.

Fresh tracts reserved.

3. The reservation of forest land was conducted under the old rules, the Forest Act for Burma not having come into force till the 1st July last. At the close of the year 1880-81 the extent of forest reserves was 2,040 square miles, and the tracts within reserve limits which had been set apart for the use of Karens amounted to 248·5 square miles. On the 31st March 1882 the extent of forest reserves reached 2,876 square miles, while the Karen toungya area had grown to 398·5 square miles. The increase of 836 square miles is made up as follows :—

Forest division.		Name of reserve.	Gross area, square miles.	Deductions.		Net area, square miles.	Total, square miles.
				Area square miles.	On what account.		
Tenasserim circle.	West Salween ...	Upper Mehthalouk...	14	...			
		Lower Mehthalouk...	6	...			
		Mehwaing ...	...	1·5	Thrown out of reserve ...	18·5	18·5
	East Salween ...	Winsaw ...	10	...			
		Meethaway ...	19	...			
		South Myawadee ...	·28	...	.....	29·28	29·28
Pegu circle.	Prome ...	Thayetmyo, East Yoma extension ...	8	...	.....	8	
		Saingdo ...	1·9	...	.....	1·9	
		Thabala ...	9·5	...	.....	9·5	
		Mindone Yoma ..	260	...	.....	260	
		Ngawet ...	5	...	.....	5	
		Prome, East Yoma... (North, South, and Middle Nawin) ...	152·5	43	Karen toungya area.		
		Wapyoo ...	...	2			
		Moedo ...	...	8			
		Thitwa ...	...	4			
		Singoung ...	...	5			
		Poothya ...	...	8	Absorbed in Prome East Yoma reserve		
		Thapanchoung ...	...	5			
		Loothay ...	...	1			
		Loobone ...	...	1			
		Bamboung ...	...	2			
		Oopanlangyoe, Oopanlangalay, Yaytha ...	...	4		79·5	358·9
	Rangoon ...	Upper Zamayee ...	228	88·5	Karen toungya area ...	139·5	
		Lower Zamayee ...	175	18 5	ditto ...	156·5	296
	Toungoo ...	Kyoukmasin ...	32	...		32	
		Saing	101	...		101	133
		Total ...	1,017·13	181·5		835·63	835·63

Character of new reserves.

4. The work of reservation done in the Tenasserim circle in 1881-82 was comparatively small. It was not possible to put a Civil Officer on special forest duty throughout the whole season. In the Pegu circle the tracts brought under reservation were very extensive. Some part at least of the work has been done with extreme deliberation, the final settlement of the East Yoma or Nawin reserve having, from one cause or another, occupied ten years. Excluding the area set aside for Karens for the practice of toungya-cultivation this reserve takes up 109·5 square miles of country, but 30 square miles of the forest consist of small tracts already reserved,

which for the future will not be shown as separate reserves. The area of this reserve is said to be nearly all productive of excellent teak, though it has suffered grievously in the past from the ravages of toungya-cutters. The Mindone Yoma reserve, of 260 square miles, does for the hills in Thayetmyo on the west of the Irrawaddy what the Thayet Yoma reserve does for those on the east of the river. There is not at present much teak or other useful forest growth in this tract, but the protection which will in course of time be afforded to the sources of the streams which lie in the Mindone hills will be of great importance to the country. If fire can be kept out, the streams will no doubt become perennial as in other reserved tracts. The Upper and Lower Zamayee and Saing reserves are also extensive forests, containing more or less teak-producing land. The line of export for the northern portion of the Saing reserve and for the Kyoukmasin reserve unfortunately lies through Upper Burma, where, as recent experience has shown, difficulties are liable to be thrown in the way of the extraction of timber.

The result of these operations is that the work of reservation is far advanced, especially in the Pegu circle. The Conservator remarks that it may be considered to be completed on the west slope of the Pegu Yoma. In both the Tenasserim and Pegu circles the Forest Department have given the subject of further reservation due attention, and several tracts have been examined more or less carefully with a view to converting them into reserved forests. Preliminary proposals for reservation have already been approved in some cases.

Effect of reservation on the people.

5. Except in the case of the Nawin forests mentioned above, in which much time and care were expended in adjusting the claims of toungya-cutters, the reservation of forests has been conducted without excessive delay or labour and with the smallest amount of interference with the standing privileges of the people. Great pains have been taken by the officers employed on forest demarcation to ascertain and sift the claims of the neighbouring inhabitants in respect of the forests proposed for reservation, and the claims put forward have been dealt with liberally and indulgently. Wherever the removal of villagers from forest land has been found necessary, and such cases have been but few, the utmost consideration has been shown for the convenience of the people in fixing the time for moving, and compensation has been made on a generous scale for the trouble involved in shifting their dwellings. In many instances the formation of a reserve is a direct benefit to the people, particularly Karens, living near it, who thereby obtain remunerative employment from the Forest Department. The Karens as a body no doubt dislike forest reservation, not because it brings them distinct hardships, but because it puts restraint on the boundless license they have been wont to enjoy. The attitude of these people in the matter is well explained by the Pegu Conservator. He says :—"The Karens themselves say that once they were like jungle-fowl, "hiding where they liked, scratching the earth here and there, and putting in "a grain of rice, and eating what came of it, if the nats (*i.e.*, spirits) permitted, but "that now the Forest Department put them into boundaries here and boundaries "there, and that they feel like pigs in a pen. But after a certain time has elapsed "they rarely deny that their latter state is preferable to their former, more especially "in or near fire-traced reserves, where work is constantly obtainable. With the

"careful way in which enquiries are made and privileges and rights granted, we "have a right to expect such favourable results."

How little the reservation of forests presses on the people may be judged by the fact that, although the area of forest reserves reached 2,876 square miles, there were only two breaches of the rules and no prosecution in the Tenasserim, and nine prosecutions in the Pegu, circle.

The Protection of Forest Reserves.

Area under protection and cost.

6. With the exception of the cutting of a few creepers and trees overhanging young teak plants, the protection of forest reserves and plantations has been confined to measures for keeping a comparatively small area free from fire. These measures have on the whole been attended with success. The area under protection from fire was 115,982 acres, of which only 1,906 acres were burnt, leaving a balance of 114,076 acres actually kept free from fire. In the previous year 19,360 acres were burnt out of 96,218 acres under protection, so that the area actually protected was 76,858 acres. The result is an improvement of 37,218 acres successfully protected. At the same time the cost of protection has increased by only Rs. 780, from Rs. 10,577 to Rs. 11,357. The increase in the extent of reserved forest under protection from fire has taken place entirely in the Tenasserim circle; in the Pegu circle the area was slightly reduced. The average cost per acre of successful protection was one anna seven pies, against two annas two pies in the previous year. The cost of protection varies greatly according to the situation of the reserve, the nature of the surrounding country, and the character of the neighbouring forest growth. Sometimes it is almost nominal. In other cases, especially where there are outlying reserves surrounded by cultivated land and kaing or elephant grass, as Magayee, Prome, Myodwin, the rate reaches as much as eight annas eight pies an acre. Kaing grass is the great enemy to the safety of forests from fire, and it is only by its extermination that absolute protection can be secured. A circle of fire-tracing is not sufficient; the kaing must be killed by the production of forest growth in its place. This plan is being followed in Toungoo, where a variety of evergreen trees is planted round reserves.

Extension of fire-protection.

7. Both Conservators propose an extension of fire-protection operations, and their proposals may be carried out wherever the assistance of Karens or other forest folk can be obtained on the spot. Where these people help, the results have been very favourable.

Of the fifteen fires that occurred during the past year most were no doubt due to accidental causes, but several are attributed, on more or less strong grounds, to incendiarism, some for the purpose of driving game out of the forest, but others from purely malicious and mischievous motives. Cases of incendiarism do no doubt occur among Burmans. Unfortunately none of the offenders were caught.

Effects of protection.

8. The Pegu Conservator makes some very interesting remarks in his report on the injurious effects of fires from a forest point of view. Teak plants of tender age suffer

greatly from fire, but those of older growth exhibit a surprising degree of resistance to its influence. The effects of kaing-grass fires seem to be most fatal. It is a subject of regret that so, comparatively, small an extent of the forests in Burma can at present be guarded against the fires which recur year after year and do incalculable damage. Not only do they destroy valuable seedlings and plants and seriously check natural reproduction, but they burn up the covering of dead leaves and other things on the ground, prevent the formation of humus, destroy the power of the forest to store rain, and lay bare the soil, which is consequently washed away into the streams. If fire can be kept out, all these evils are prevented, forest growth is stimulated, a perennial water-supply is ensured, and the country below is immensely benefited. The task of stopping the yearly fires in all reserved forests will not be completely achieved for many years to come; it is only by steady, patient, and careful work that any approach can be made to its accomplishment.

Reproduction and Improvement of Forest Growth.

The reproduction of teak.

Teak plantations managed by the Department.

9. No works of improvement were carried out, and consequently no outlay was incurred, during the year on the three small teak-plantations in the Tenasserim circle, which cover an area of 23 acres only. In Pegu some Shans planted up with teak an area of about 15 acres at Magayee at a cost to the Department of Rs. 14-4 an acre. The plantation at Myouktoung in Arakan, area 10 acres, has been added to the list of teak plantations in the Pegu circle, bringing up their total area to 3,541 acres. Leaving out Magayee, where a permanent establishment has to be kept up, these plantations cost but a nominal sum for maintenance during the year. There is still a good deal of ground available at Magayee for teak planting, and the Conservator proposes to treat it on the toungya system.

Toungya teak plantations.

10. At the close of 1880-81 the area of these plantations was 3,615 acres, the cultivation of which up to that time had cost on an average Rs. 8 an acre. In the report for the above year the area was given as 3,587 acres, an omission having been made of 28 acres cultivated in the Bawbin Choungwa reserve during 1880-81. The additional area planted in 1881-82 on the toungya system was 189 acres in Tenasserim and 635 acres in Pegu. This is considerably less than Mr. Brandis's programme and less than what was done last year. The Forest Department should not be satisfied with the progress of teak plantation until they can show from 1,250 to 2,000 acres of fresh toungya plantation each year, and can also report that all the plantations of previous years are in satisfactory condition. Now that we are making no further plantations on the regular European system, the extension of teak toungya plantations becomes more important than ever. The entire area of teak toungyas in the province at the end of 1881-82 was 4,439 acres, costing on an average about Rs. 9-13-11 an acre. The toungya system is succeeding admirably; the major portion of the areas on which it has been tried is now well stocked with healthy seedlings; and both Conservators are fully alive to its great prospective benefits and are taking advantage of every opportunity for promoting the system. At Magayee there are about 700 acres still available for toungya teak cultivation. The Conservator proposes to carry out the

work gradually through the agency of the Shans now on the spot, who have agreed to remain and to try and induce others of their countrymen to settle there also. Including 100 acres at Magayee, the Conservator hopes that an attempt will be made next year to cultivate a further area of at least 1,150 acres by the toungya system in the Pegu circle alone. The Karen cultivators are beginning to show more confidence and to take more kindly to the work.

Mr. Ribbentrop alludes, at paragraph 20 of his report, to a most promising experiment in toungya teak planting in areas where the bamboo has flowered. Formerly it was the practice to leave the flowering bamboos alone and merely dibble in the seed over the area covered by them. The new system is to burn the flowering bamboos and plant up the area so burnt over with teak seedlings transplanted from nurseries. In this way 450 acres were planted last season, and the results are very good over about three-fourths of the area. Another area of 500 acres has been burnt in like manner for further operations. The system is no doubt an excellent one, especially as it can be seen the season before, by the bamboos not sending out new shoots, that they will flower next year. Arrangements can thus be made for labour, &c., for the work a year in advance. The ground burnt over is in as good a state for the work as the toungya ground of the Karens, the planting succeeds better than dibbling, and the expense is but a trifle more. It is, however, very necessary to guard against fires in carrying out the system, and this danger the forest officers must keep carefully in mind.

Reproduction of cutch.

11. The reproduction of cutch trees has also been tried in the Tharrawaddy division. Satisfactory results have been obtained, and the Conservator has been asked to consider how operations for this mode of reproduction of cutch can be extended. In the Thayetmyo district, where the people are poor and cultivation is very scattered, the creation of extensive cutch toungya plantations ought to be comparatively easy. Now that the supply of cutch trees is failing, this matter becomes of very urgent importance. In Tenasserim the reproduction of padouk has been tried on a small scale. The results are as yet doubtful, but if they should in the end prove encouraging, the toungya system may perhaps be applied to the reproduction of pyinma, in, thingan, and other useful kinds of timber.

Cultivation of exotics

12. The experimental cultivation of various exotics was continued at Mergui and Tharrawaddy. The plants of the Para India-rubber tree, 60 in number, remaining out of about three times that number sent from Ceylon to Mergui, are still alive and said to be growing fairly well; so also are the plants sent from Calcutta. Cuttings from these last have not hitherto done well, most of them having died whether planted out in shaded beds or under glass.

Hevea brasiliensis

The plants of *ceara* rubber seem to do well at Mergui, the number having doubled since last year. The hot weather tries them somewhat. A number of the *ceara* trees growing at Magayee were destroyed by elephants; the remaining 23 trees are doing well.

Ceara (Manihot Glaziovii)

Only 39 plants of this species now survive at Magayee, and their growth is very slow.

Chevancesia esculenta.

Mahogany.

If it were not for the attacks of insects, the mahogany plants in Mergui and Amherst would do well; such of them as have escaped are said to look vigorous and to make excellent growth. In the Pegu circle there are now 90 trees besides some seedlings. At Akyab there are 11 mahogany trees, the survivors of some seedlings sent from Calcutta 40 years ago. They have attained a height of from 40 to 65 feet, but do not appear to have developed very successfully as timber-yielding trees.

The experimental cultivation continues of vanilla, *Musa textilis*, *Ficus elastica*, mulberry, &c., but with very varying fortune.

Cinchona.

Much money has been spent on the cinchona plantation at Thandoung, some miles to the north of Toungoo, and about 54,000 plants are now alive. But the plantation does not thrive so well as could be wished, and it is desirable that the advice of an expert should be obtained as to the best course to be taken. It was hoped that Dr. King would have visited Burma, but as yet he has been unable to do so. If the Government of Bengal can spare him, perhaps he will be able to come in May 1883. At Pyoonchoung the cultivation of cinchona has done so poorly that orders have been given to abandon further outlay on the experiment there. About 300lbs. of cinchona bark were recently received from Thandoung, and arrangements have been made for testing its medicinal value. A portion of the Thandoung plantation has been sacrificed to make room for a sanitarium for the troops in garrison at Toungoo.

Tea and coffee.

The cultivation of tea and coffee at Thandoung was undertaken two years ago under directions from the Government of India. The plants of both kinds are growing well, and the experiment, if allowed a fair chance, promises to be successful. When the railway to Toungoo is opened, it is hoped that private capital may be attracted to the locality.

Excluding Thandoung, the outlay on which for the year was Rs. 3,140, and the total to date Rs. 50,203, these experimental nurseries have been carried on at a moderate cost.

The Protection and Working of Forests not included in Reserves.

Reserved trees.

13. The operations of the Forest Department in respect of unreserved forests have been of the same nature as in the previous year, the changes introduced by the new Forest Act not having come into force during the year. No alteration was made in the list of reserved trees. With the exception of one or two kinds, the bringing out of reserved trees is left for the most part to private agency. It is difficult to protect teak and other valuable trees in unreserved tracts. Still the breaches of forest rules are probably not numerous. Deducting the nine cases relating to forest reserves already mentioned, there were only 86 forest cases before the Courts in the province during 1881-82. Mr. Ribbentrop's plan for disposing gradually of the teak trees standing in the Tharrawaddy rice plains is approved. It is not desirable to sell these trees as they stand in large numbers to outsiders. But the early disposal of these trees is a matter of importance, both to the landholders and to the public treasury; and the matter must be kept constantly in view by the Deputy Conservator and by the District Officer.

Girdling operations.

14. In 1881-82, 18,850 teak trees and 5,359 trees of other kinds, a total of 24,209 trees, were girdled outside reserves, besides 200 teak trees within reserves, at a cost of Rs. 6,210. About 11,000 teak trees outside reserves will be girdled in the coming season, and it is estimated that there will then remain about 26,000 or 30,000 trees, the girdling of which will extend over two years. Time will thus be afforded to the Department to mature its schemes for the felling work to be done thereafter within reserves. It is hoped that arrangements will be made to admit of an officer being appointed specially to prepare the working plans. A beginning may be said to have been made by the forest survey, which has been conducted in Tharrawaddy by the Cadastral Survey Department.

REVENUE.

The total revenue of the Forest Department in 1881-82 amounted to Rs. 22,31,804, being an increase of Rs. 7,15,191 over that of the previous year. The receipts of the two years are compared under the several heads in the table below :—

		1880-81. Rs.	1881-82. Rs.	Increase or decrease. Rs.
Timber and other produce removed from the forests by Government agency		8,61,487	15,55,248	plus 6,93,761
Timber and other produce removed from the forests by consumers or purchasers.	Timber	94,951	1,19,181	plus 24,230
	Firewood and charcoal ...	1,497	1,552	plus 55
	Bamboos	1,890	3,857	plus 1,967
	Grazing and fodder grass ...	79	132	plus 53
	Other minor produce ...	90,668	52,094	minus 38,574
Confiscated drift and waif wood		1,28,099	1,58,360	plus 30,261
Duty on foreign timber and other forest produce ...		3,25,202	3,32,877	plus 7,675
Miscellaneous		12,740	8,503	minus 4,237
	Total ...	15,16,613	22,31,804	plus 7,15,191

Only in "minor forest produce" and "miscellaneous" has there been any falling-off. The large increase of nearly seven lakhs has occurred in timber extracted by Government agency. This is due to the larger quantity brought out and to the enhanced price of timber, especially teak, which stimulated extraction. The number and quantity of logs and pieces of timber of all kinds extracted by Government agency were in the past two years—

	Number of logs and pieces.	Quantity. Tons.
1880-81	35,487	18,010
1881-82	198,789	50,517
Increase ...	163,252	31,607

Of this timber 43,630 logs and pieces and 29,615 tons were teak. The high prices prevailing caused a considerable amount of inferior teak to be brought out. Comparing the quantities of teak extracted in the last five years we have in—

	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.
Tons ...	39,081	22,763	17,585	22,258	31,246

Teak as a general rule is brought out of the forests only under the management of the Forest Department. The Chief Commissioner is particularly glad that the Forest Deparment and the people generally have taken so largely to extracting

and using other timbers than teak. There are many excellent timbers besides teak in the Burma forests; and it may be hoped that the exploitation of these timbers will continue to expand.

Timber of other kinds is extracted either by Government or private agency. The following statement shows the number of logs and the quantity extracted in 1880-81 and 1881-82 under the various systems in use :—

	By Government agency		Under trade permits		Under free permits.		By lease-holders		By purchasers		Total.	
	Logs.	Tons	Logs.	Tons.	Logs.	Tons.	Logs.	Tons.	Logs	Tons.	Logs.	Tons.
1880-81 ...	10,787	2,916	17,661	10,303	77,934	35,884	677	695	1,931	999	108,970	50,757
1881-82 ..	155,100	20,002	46,630	23,277	106,042	42,413	276	353	520	246	308,585	87,171
Increase	144,322	17 086	28,975	12,914	28,118	6,529	...		.	..	199,615	36,414
Decrease .	...	.		.		...	398	292	1,401	753	.	

A certain amount of teak is included in the timber extracted by agency other than that of the Forest Department. Some of the teak was sold *in situ* to facilitate the construction of public works, some was refuse teak utilised in the making of cart-wheels, but the largest portion consisted of trees, 4,190, sold standing in paddy-fields to local purchasers.

The falling-off under the head of "minor forest produce" is chiefly owing to the decline in the production of cutch. Only 2,611 cauldrons were at work in place of 7,275 cauldrons in 1880-81. The amount realized for permits to manufacture cutch was Rs. 48,486, against Rs. 81,066 in the previous year. The Conservator of Pegu considers that the decrease has taken place because the cutch supply outside reserves is nearly exhausted. The fee for manufacture was raised to Rs. 20 per cauldron, and a special report has been called for whether this circumstance has had a deterrent effect on production. The high price which people are ready to pay for cutch trees in reserves, which the Conservator calculates to be equivalent to a fee of Rs. 200 per cauldron, seems to negative any such supposition.

The increase in the receipts from duty on foreign timber has occurred notwithstanding a reduction in the rate at Kado, Moulmein, the only place where duty is levied, from seven to one per cent. *ad valorem* since the 1st January 1882. The tonnage of foreign timber imported by the Salween was in 1881-82 129,290 tons, an increase of 20,210 tons over the quantity brought down in 1880-81 and in excess of the quantity in any other year since 1877-78. The charge of one per cent. *ad valorem* now levied is merely a fee to cover expenses at the collecting station. There has not yet been time to see the full effect of the reduction on importation. The benefit of the reduction is said to be appropriated by the owners of the timber in the foreign forests.

Expenditure.

15. The expenditure of the two past years stands as follows :—

	Conservancy and works.	Establishment.	Total.
	Rs.	Rs.	Rs.
1880-81 ...	4,77,866	2,34,702	7,12,568
1881-82 ...	9,08,974	2,41,249	11,50,223
Increase	4,31,108	6,547	4,37,655

The increase in expenditure is principally due to the enhanced cost of extraction of timber by Government agency owing to the larger quantity brought out

of the forests, the figures being,—1880-81, Rs. 3,86,679; 1881-82, Rs. 6,98,190; increase Rs. 3,61,511.

General.

Exports of teak and other timber.

16. There was much activity in the timber trade throughout the year and good prices were obtained for teak both in Bombay and Calcutta, rates in Europe being also well maintained. The actual exporters of the timber do not, however, appear to have profited very largely by the improved state of the market, as they had to pay unusually high rates for their purchases. The high price of teak caused dealers to turn their attention to thingan, pyinma, and other cheaper but still serviceable timbers. The exports of teak for the year amounted to 22,445 tons from Rangoon and to 111,306 tons from Moulmein, as against 37,875 tons and 113,399 tons respectively in the preceding year. Of other kinds of timber 39 tons were exported from Rangoon and 3,314 tons from Moulmein compared with 187 and 1,763 tons respectively in 1880-81.

Forestry in Arakan.

17. A report in great detail on the position and prospects of the forest question in Arakan has been prepared by Mr. J. Nisbet, Officiating Deputy Conservator of Forests, who was stationed in that division throughout the year. This report is at present being reviewed by the Conservator of Pegu.

Clearance of obstructions in streams.

18. Dynamite has now been brought into use in clearing rocky obstructions in many of the timber-floating streams and channels, and considerable good was done in both circles by its agency during the year. Fisheries in some places were found to interfere unduly with the floating of timber, and in the Shwaygyin district a number of fishery leases have been cancelled in the interest of the Forest Department. In many places logs of timber have sunk and become imbedded in the bottom of the channels. With the assistance of the Public Works Department, many logs, together with accumulations of silt, have been removed.

Steam tree-feller.

19. One of Ransome's steam tree-fellers has recently been procured from England for use in the preparation of locomotive fuel for the Irrawaddy Valley Railway, the demand for which is at present about 10,000 tons a year. The machine, which is not yet at work, is expected to save much expense and labour. The forests where the timber is to be cut will be resown with seeds of teak, pyingado, and other trees, the reproduction of which, with careful protection from fire, runs little chance of failure.

Steam-launches.

20. During the year a steam-launch was obtained from the Calcutta dockyard for the use of the Pegu Conservator, and one is now being built at the same place for use in Tenasserim.

New forest office at Moulmein.

21. A building suitable for a forest office, and sufficiently large to accommodate both the Conservator's office and those of the other forest officers whose head-quarters are in Moulmein, was bought early in the year for Rs. 5,000. It has been put into a thorough state of repair at an outlay of Rs. 3,460 more.

22. In both circles the officers of the superior staff suffered more or less from fever. Mr. Hearle, an Assistant Conservator of very short service, was obliged, owing to repeated attacks of illness, to apply for a transfer to India. There was much sickness amongst the subordinates, one of whom died, and many forest rangers suffered severely from rheumatism and fever. Apart from the case of a forest ranger who embezzled some Government money and absconded, the conduct of the subordinate establishments was satisfactory.

Health of forest officers and subordinates.

23. Two forest apprentices were sent to Dehra Dun during the year for a course of instruction at the forest school, and satisfactory accounts of their progress and conduct have been received. Recently three more apprentices have been sent to Dehra Dun, and the selection of four more probationary candidates has been sanctioned.

Forest apprentices at Dehra Dun.

24. The staff of the Forest Department in both circles have worked well during the year, and are entitled to the thanks of the Chief Commissioner. As Mr. Ribbentrop will probably be leaving Burma a few weeks after the issue of the present review, the Chief Commissioner takes opportunity to acknowledge the excellent service done by that officer in the forests of Burma. Though greatly regretting that Burma should lose his services, Mr. Bernard felt unable to oppose Mr. Ribbentrop's transfer to his old province. When reporting to the Government of India on the proposed transfer, the Chief Commissioner submitted that Mr. Ribbentrop "has done "really excellent work. The Chief Commissioner does not see sufficient reason "for standing in Mr. Ribbentrop's way, even if he had the power to do so, "though Mr. Ribbentrop's administrative tact, his mental and physical vigour, "and his successful nursing of the forest revenues will be greatly missed."

Services of officers.

By order of the Chief Commissioner,

G. D. BURGESS,

Secretary.

REPORT

ON

THE FOREST ADMINISTRATION

OF

BRITISH BURMA

For the year 1881-82.

BY

H. C. HILL, Esq., Offg. Conservator of Forests.

TENASSERIM CIRCLE.

CHAPTER I.

RESERVED FORESTS.

1.—Area and Boundaries.

Increase in area of State reserves.

DURING the year the Upper and Lower Mehthalouk reserves in the West Salween division; and the Winsaw, Meethaway, and South Myawadee reserves in the East Salween division were sanctioned and duly notified in the Gazette. They represent an addition of 49·23 square miles to the reserved area; but a modification of the boundary of the Mehwaing reserve reduced its size by 1·5 square miles, and brought the increase of reserves for the year to 47·73. The State reserves of the different divisions aggregated at the close of the year 436 square miles :—

	Square miles.
East Salween division	177
West Salween division	104
Ataran division	155
Total ...	436

Reservation proposed and contemplated in the East Salween division.

2. In the East Salween division proposals for three other teak reserves were in course of submission to the local Government on the 31st March. The reservation of an area suitable for the production of padouk is contemplated, and, with a view to this, the forests of the Houngdaraw valley were examined by Captain Bingham, Deputy Conservator of Forests, but trees of this species were found to be so sparsely scattered, that the project of forming a reserve there was given up. The forests of the Hlaingbweh valley and those east of Kawkareik have still to be reported on, and a padouk-producing tract, if found of sufficient value, will be selected for reservation. Teak is found in considerable quantity in the Hlaingbweh forests, and a small teak reserve may be taken up there.

Additional forest reserves proposed in the West Salween division.

3. A reserve has been formed in this division since the close of the year, and proposals for another have been submitted. The divisional officer has also selected an area on the Myintabyay stream, but it has to be visited and reported on by a forest settlement officer. This, it is believed, will complete demarcation work in the West Salween division.

4. No addition was made to the State reserves of the Ataran division. An area of 320 square miles has been selected in the Yay township, but proposals could not be submitted owing to no civil officer being available for forest settlement duty.

Area selected for reservation in the Yay forest.

5. In the Salween division a tract of about 20 square miles, situated on the Martaban range of hills, was examined by the local civil officer and a forest officer; their proposals, however, were not received up to the close of the year.

Proposed reserve on the Martaban range.

6. Final proposals have been submitted to the local Government for the reservation of 100 square miles on the Mintha stream, and the divisional officer was employed for the greater part of the season on the survey and examination, with a view to the selection of areas for reservation, of the forests at the sources of the Tavoy river.

Final proposal of the Mintha reserve and selection of proposed reserves in the Tavoy district.

7. Shway Kyay and other influential Karens of the Thoungyin petitioned the Chief Commissioner on the occasion of his visit to Myawadee to alter the boundaries of the Kyoukket reserve, and the Deputy Commissioner recommended that Karens should be allowed to cut yas inside reserves in localities not producing teak. No alteration was made, but the submission of a yearly report on the effect of reservation on the Karen population of those parts was ordered.

Petitions against reserves in the Thoungyin.

8. The expenditure on demarcation during the year amounts to Rs. 6,731, but of this Rs. 5,560 were paid on account of the preliminary and final demarcation in the Thoungyin valley reported in last year's annual report.

Expenditure on demarcation.

2.—Protection of Forest Reserves.

9. Measures for the protection from fire of 60,120 acres have been most successful, the favourable season contributing materially to the success, and 58,810 acres were actually protected.

Fire-protection.

10. The area attempted was increased by the addition of the West Mehpaleh reserve and a portion of the Beelakatkyee reserve, while a smaller area was attempted in the Onekangyee reserve, and the portion excluded from the Mehwaing reserve was omitted. These changes in the area attempted had been arranged for prior to the circulation of the Government of India's review of the British Burma Forest Report for 1880-81.

Increase over last year in the area attempted.

11. The total outlay, including Rs. 578, cost of clearing the new lines round two sides of the West Mehpaleh reserve, amounted to Rs. 1,409. The areas attempted and protected, as well as expenditure, are distributed over the different divisions as follows :—

Cost of fire-protection and distribution of protected areas.

Division.	Area attempted.	Area protected.	Cost.
	Acres.	Acres.	Rs. A. P.
East Salween division	19,200	17,920	578 0 0
West Salween division	30,520	30,490	671 0 0
Ataran division	10,400	10,400	160 0 0
Total ...	60,120	58,810	1,409 0 0

12. A fire broke out in the Sinzweh reserve in March and burnt over 30 acres; it was in all probability accidentally lighted by a passer-by. The burnt portion was not stocked with teak and no serious damage was done. The fire which entered the Mehpaleh West reserve came from a distance; it occurred in March before the fire-traces were properly finished and burnt over two square miles of the reserve.

Explanation of failures.

13. If teak toungya cultivation is to be extended, then it will be necessary from time to time to take in hand new areas for fire-protection; and, if Karens can be found to cultivate in the Goongyee and Natchoung reserves of the Ataran division, and in the Mehpalch East reserve of the East Salween division, I would advocate these reserves being fire-traced from next year.

Extension of teak toungya cultivation necessitates increase of fire-protected areas.

14. Beyond the unauthorized cutting of two 'yas' inside reserves, there were no breaches of the forest rules in reserved forests. The offenders were not punished; the one absconded, and the other's plea of ignorance of the proclamation was accepted.

Protection in other ways.

CHAPTER II.

Reproduction and Improvement of Forest Growth.

1.—Reproduction of Teak.

15. Teak toungya plantations have been limited to the West Salween and Ataran divisions, and covered at the close of 1880-81 an area of 1,070 acres in the former and 46 acres in the latter. During the year 155 acres were cultivated in the West Salween division and 34 acres in the Ataran division, bringing the total area up to 1,305 acres.

Teak toungya plantations.

16. The progress made by the Karens in this cultivation is very marked, particularly in the West Salween division, where the 'yas' of 1881 are uniformly well stocked. The average number of plants counted to the acre was 588. In the Kyoonchoung reserve of the Ataran division the result is good considering the Karens planted for the first time; and in the Dalee reserve the nine acres cultivated are well stocked.

Progress in teak toungya cultivation.

17. The 189 acres cost, inclusive of seed and capitation-tax, Rs. 1,196, or Rs. 6-8-8 per acre, and Rs. 726 were expended on the weeding and maintenance of the older plantations.

Cost of cultivation and weeding.

2.—Reproduction of Padouk.

18. Eight acres of toungya in the Kaheelo reserve were as an experiment sown with padouk at a cost of Rs. 11; countings gave 1,540 plants, or 192 to the acre, but the seedlings were not strong, and it is not reported how many survived the hot weather.

Experimental padouk toungya cultivation.

3.—Introduction of other Trees and Plants.

19. The 63 plants reported as surviving last year are vigorous and making good growth. Only 15 of the 50 cuttings reported on have established themselves. Further attempts to propagate by cuttings are being made, but with small success.

Para India-rubber (*Hevea Brasiliensis*) at Mergui.

20. Considerable growth has been made by the two plants of this species.

Castilloa elastica at Mergui.

21. There are now 1,250 trees and plants of *ceara* in the plantation; during the rainy season they shoot vigorously, but die back slightly in the hot weather: 4,000 seeds have been collected, and the plants raised from these will be put out in the rains.

Ceara (*Manihot Glaziovii*) at Mergui.

22. Mahogany suffers very much from the attacks of insects; caterpillars eat its young shoots, leaves and all, and a beetle bores along the centre of its stem. At Mergui 53 plants have survived, and of these 28 only can be said to be healthy. In the experimental plantation at Amherst 20 more seedlings were set out in August, and in all 90 plants were alive and vigorous at the close of the year.

Mahogany at Mergui and at Amherst.

Some 50 per cent., however, had suffered in a similar way to those at Mergui, but in a smaller degree. Five trees in the forest office compound at Moulmein are strong and healthy. The trees which escape the ravages of insects make excellent growth, particularly at Amherst, where the highest plant measures eight feet.

Cultivation of *Musa textilis* at Tavoy and Mergui.

23. The shoots of Manilla hemp planted at Mergui failed to establish themselves; but at Tavoy, of 15 plants set out, seven have grown vigorously, but as yet they are too young for experiment on the fibre.

Introduction of other plants and trees at Mergui.

24. The cocoa plant died, and the two vanilla plants, now that they have been removed under the cover of high forest, are reviving. Four plants of *Ficus macropylla* have been raised from some cuttings received from Singapore. *Pithecolobium saman* plants do not thrive in the Mergui plantation. They live, but their growth is stunted and irregular. *Broussonettia papyrifera* seedlings to the number of 700 or 800 have been raised.

Expenditure on the cultivation of exotic trees and plants.

25. Experimental plantations have cost during the year the following sums:—

	Rs.
Mergui	1,888
Tavoy	40
Amherst	66
Kyoonchoung	12
Total ...	1,956

CHAPTER III.

Unreserved Forests.

Area.

26. The area of unreserved forest was considerably increased from the 1st November 1881, by a notification making the forest rules applicable to the whole of the Tenasserim civil division. The chief additions consist of the forests on the Beelin river south of Pawata, the Lower Salween forests, the forests of the Ataran valley below the junction of the Winyaw stream, the forests on the Tavoy river below the Choungzouk stream, and some tracts in the Mergui district.

Reduction of duty on trees of the reserved kinds in Mergui.

27. On the representation of the Deputy Commissioner of Mergui, the felling fee on trees of the reserved kinds was reduced to four annas and the tonnage duty to Rs. 2 for a period of three years. This was done with the object of inducing men to establish saw-mills and develop the trade in timber.

Production of teak outside reserves difficult.

28. The protection of teak outside reserves in remote parts, such as the Thoungyin valley, the Mehthalouk, and Upper Salween forests, is a difficult task. Karens are constantly crossing and recrossing the frontier, and make their clearings regardless of the prohibition to cut toungyas in teak localities. It is not practicable to prosecute these men, and an attempt is being made to arrange with offenders that, in consideration of their not being prosecuted, they should plant up their 'yas' next year with teak.

Breaches of forest rules.

29. The case of a contractor's men felling green teak in the Donedamee forests in contravention of the conditions of an order to cut only dry and windfall trees was tried by the Deputy Conservator, Salween division, and a fine of Rs. 50 inflicted for a breach of Rule VI of the Forest Rules. By order of the Judicial Commissioner this sum had to be refunded, but, as it was provided in the order that the contractor should hold himself liable to a fine of Rs. 50 for each green teak tree cut or injured, the original fine was taken departmentally. Illicit girdling of pyinma in the Houngdaraw forests was reported to the Deputy Commissioner of Amherst, and the cases were still pending at the close of the year. Several minor cases of

breaches of rules under notification No. 34 of 1876 were discovered; one case was tried and dismissed by the Deputy Conservator, Salween division; and others were disposed of by the renewal of permits on payment of a second fee or by the detention of boat-hulls. There were four prosecutions in the South Tenasserim division implicating four persons; two were acquitted and two were convicted and fined for the unauthorized felling of trees of the reserved kinds.

Projected purchase of the lease of the Meeteegeik and Meeteegeik Kodoogweh forests.

30. Negotiations were entered into at the commencement of the year with Ramasawmy Raja, lessee of the Meeteegeik and Meeteegeik Kodoogweh forests of the Ataran division, for the purchase of the remainder of his lease, which has still 56 years to run. He asked at first Rs. 60,000, but afterwards told Colonel Seaton he would accept Rs. 53,000. After a thorough examination of the forest, and a valuation, which would seem to have taken too low an estimate of the growing stock, it was proposed that Rs. 40,000 should be offered to Ramasawmy. By the time sanction was received to this proposal, Ramasawmy was in a position to see that his expectations of realizing Rs. 40,000 on the year's outturn alone were in a fair way to be realized, and he refused the offer. A further proposal by the Conservator to pay Rs. 60,000, or a smaller sum, giving up the yield of the year to the lessee, was not approved of, and the project was abandoned. The yield of the year from the forests actually was 1,092 logs and pieces of teak and 278 logs of thitka, extracted at an estimated cost of about Rs. 13,000. The teak was disposed of for Rs. 59,827 and the thitka for Rs. 5,110, or a total of Rs. 64,937, the purchaser paying the duty. Ramasawmy, therefore, made a clear profit of about Rs. 52,000, and has reason to congratulate himself on not having found a purchaser for his lease in May 1881.

CHAPTER IV.

YIELD AND WORKING.

1.—Timber and other Produce extracted by Government Agency.

Yield of teak.

31. All timber extracted from the East and West Salween and Ataran divisions is brought to Moulmein for disposal by the officer in charge of the Salween division. The quantity of teak brought to depôt during the year from the different divisions was—

Division.	Logs and pieces.	Tons.
Salween division	4,714	1,035
East Salween division	14,307	9,329
West Salween division	3,868	1,085
Ataran division	1,748	523
Total ...	24,637	11,972

This outturn is more than double that of the previous year, and is due to the high prices ruling in Moulmein for inferior teak logs and pieces, which have enabled us to work out at a profit refuse teak that had accumulated in the forests for years. The only logs of any size and quality were yielded by the Thoungyin forests and numbered 7,643, but of these only about one-third could be considered fit to yield 1st class squares.

Cost of extraction of teak other than Thoungyin.

32. The cost of extraction of 15,007 pieces, or 3,702 tons, of teak, other than Thoungyin, was Rs. 3-5-0 per piece, or Rs. 13-7-0 per ton.

Cost of extraction of Thoungyin timber.

33. The timber brought to depôt from the Thoungyin, with the exception of 1,419 logs and pieces, was made up of timber of former years neaped or in transit. During the year 7,691 teak logs and pieces were launched at a cost of Rs. 63,934, or Rs. 8-8-7 per log and Rs. 4-9-1 per piece. Before arrival at depôt a further estimated expenditure of Rs. 4 per log and Rs. 1-8-0 per piece will be

incurred on pushing down, salving, and floating, making a total average cost per log of Rs. 12-8-0 and per piece of Rs. 6-1-0, or Rs. 11-4-9 per ton.

Neaped Thoungyin timber.

34. Six thousand two hundred and seventy-two logs and pieces were neaped or in transit, and 500 logs were lying in the Oohoo stream at the close of the year.

Yield of timber of other kinds extracted by Government agency.

35. The yield in timber of other kinds was as follows :—

	Thitka.		Thitkado.		Padonk.		Pyama.		Pyingado.		Thitpyoo.		Petwoon.		Thingan.		Sit.		Ingyin.		Total.	
	Logs.	Tons.	Logs.	Tons.	Logs.	Tons.	Logs.	Tons.	Logs.	Tons.	Logs.	Tons.	Logs.	Tons.	Logs.	Tons.	Logs.	Tons.	Logs.	Tons.	Logs.	Tons.
Salween division ...	20	15	...	...	...	...	...	...	321	106	...	...	...	...	...	...	...	...	...	...	350	121
East Salween division ...	1,340	1,952	...	...	217	134	58	35	...	...	270	276	...	...	...	...	...	...	...	...	1,885	2,397
West Salween division ...	...	...	40	36	...	...	...	...	92	37	170	63	...	...	...	...	...	...	...	...	302	136
Ataran division ...	942	1,251	...	...	377	284	289	182	...	...	5	8	12	5	25	18	14	6	13	0	1,677	1,755
Total ...	2,311	3,218	40	36	594	418	347	217	413	143	445	342	12	5	25	18	14	6	13	0	4,214	4,409

Cost of extraction of logs of other kinds of wood.

36. The cost of extraction of 807 tons of heavy woods and 3,602 tons of light woods was Rs. 43,369, or a little over Rs. 17 per ton for the former and Rs. 8 per ton for the latter.

Outturn of sleepers and scantlings converted in forests.

37. The forests of the Salween division also yielded 33 large-sized and 2,553 small-sized pyingado sleepers; while the outturn of the South Tenasserim division was 2,437 large-sized and 19,438 small-sized pyingado sleepers, as well as 21 tons of scantling. The cost to the Department of large sleepers delivered at Calcutta has been from Rs. 3-4-9 to Rs. 3-7-6 each; and small sleepers delivered in Rangoon have cost Rs. 140 per 100.

2.—Kado Timber Revenue-station.

Opening and closing balances of foreign timber.

38. The opening and closing balances stood as follows :—

	Logs.	Tons.
Balance on 1st April 1881	23,408	24,230
Arrivals during the year	95,077	129,290
Total ...	118,485	153,520
Passed during the year on payment of duty ...	107,901	142,429
Balance on 31st March 1882	10,584	11,091

This balance consisted of—

	Logs.
Importations, 1879-80	15
Ditto, 1880-81	626
Ditto, 1881-82	9,943

Forests from which timber entered at Kado was imported.

39. The 95,077 logs and pieces entered at the Kado timber revenue station were imported from the following forests :—

	Logs.	Pieces.
Karennee	52,285	1,069
Gyaingtonng	7,022	515
Hnaninglonegyee	7,455	476
Thoungyin	14,282	5,157
Dagwin	6,028	838

Quantity of foreign timber below the average of previous years.

40. The importation of foreign timber compared with the average of the previous four years shows a decrease of 8,638 logs, though it is 11,435 logs in excess of last year's arrivals. Considering the very high prices that have ruled in Moulmein for the past two years, the outturn should have been larger,

were it not that good timber is becoming more scarce and difficult of extraction. It has still to be seen whether the reduction of the duty from seven to one per cent. *ad valorem* will affect the yield. The arrivals from the Karennee and Gyaing-toung fall short of the previous year, while there is an increase in the quantity imported from the Hmainglonegyee, Thoungyin, and Dagwin forests. It is noticeable that the Thoungyin yielded 26,706 logs in 1878-79 and only 14,282 during the year under review.

Foreign timber other than teak entered at Kado.

41. Twenty-seven thitkado logs from forests beyond the frontier were reported at Kado.

British timber reported and cleared at Kado.

42. From the Pandaw leased forest 431 teak pieces were reported, and Ramasawmy Raja reported 1,092 teak logs and pieces and 278 thitka logs from the leased Meetecgeik and Meetecgeik Kodoogweh forests of the Ataran division.

Registration of hammer-marks.

43. During the year 190 new hammer-marks were registered, and the registration of 188 marks was renewed.

Control and protection.

44. Mr. M. J. Slym, Deputy Conservator and Magistrate of the 3rd class, held charge of the timber revenue or Kado division and disposed of 44 cases of breaches of the Kado rules and forest rules regarding drift timber. Forty-nine persons were implicated, and of these 17 were fined and 17 acquitted, while 15 were punished by the detention of their timber. The logs of 22 (including seven who were also fined) individuals were detained and 12 logs confiscated. Rs. 303 were realized in fines, but on the revision of the Judicial Commissioner Rs. 25 were remitted.

Decrease in number of cases of breaches of rules.

45. Last year no less than 78 cases, implicating 99 persons, were tried. It is satisfactory to note the marked decrease in the number of cases. Under the new rules and Act XIX, which come into force on 1st July, it is probable that more breaches of rules will at first be detected, but this will doubtless in a short time lead to contravention being of less frequent occurrence.

3.—Drift Timber.

Drift logs left over from last year and salved during the year by the Kado division.

46. There were 2,440 logs, or 1,464 tons, of drift timber on hand at the commencement of the year, and 5,881 logs, or 4,880 tons, were salved during the year, making a total of 8,321 logs, or 6,344 tons. The number of logs salved is in excess of that of the previous year by 670. Of the total collected, 5,280 were brought in from the rivers and 601 from the seashore.

Disposals by the Kado division.

47. The disposals of drift were as follows:—

		Logs.	Tons.
Made over to claimants.	Seashore salved	174	140
	River salved	3,222	2,311
Sold at depôt		2,647	2,202
Sold locally (seashore)		332	272
Used by the Department for making pathway at Kado		20	8
Transferred to the Salween division		189	138
Total disposals ...		6,584	5,066
Balance in hand on 1st April 1882		1,787	1,278
GRAND TOTAL ...		8,321	6,344

Expenditure incurred in salving by the Kado division.

48. The cost of salving 3,396 logs made over to claimants was Rs. 20,417-12-0, and on this no profit was made. The collection of the remaining 2,485 logs entailed an expenditure of Rs. 23,414-10-0, which is higher than usual owing to the larger quantity of sea-drift brought in.

Drift logs in the South Tenasserim division.

49. Thirty-six logs and squares of drift teak were salved and collected at Tavoy at a cost of Rs. 684; of these, 23 were made over to claimants and 13 were sold. At Mergui 34 drift logs were salved at a cost of Rs. 721-4-10, of which Rs. 170-4-10 will appear in the accounts of 1882-83.

4.—*Girdling Operations.*

Timber girdled.

50. During the year 2,229 teak trees, outside reserves, and 2,902 trees of other kinds were girdled in the different divisions :—

Division.	Teak	Other kinds.														
		Padouk.	Pyinma.	Petwoon.	Sit.	Ingyin.	Oukchunza.	Thingan.	Manceawga.	Toukkyan.	Kyehzeh.	Karaway.	Kanzaw.	Magalay.	Chay.	Total.
Salween division ...	..	...	...	...	200	...	...	...	...	...	...	...	...	...	...	200
East Salween division ...	1,057	200	1,009	...	...	...	...	...	...	...	...	...	...	...	...	3,166
West Salween division .	272	...	507	...	...	..	.	..	...	201	...	...	...	...	...	980
Ataran division ...	...	107	..	155	..	109	39	.	...	..	...	...	...	...	..	410
South Tenasserim division.		..	150	...	..	...	...	150	39	...	11	2	3	3	12	375
Total ...	2,229	307	1,666	155	200	109	39	150	39	201	11	2	3	3	12	5,131
															or Total teak ..	2,229
															Total other kinds ...	2,902

Cost of girdling and further record of the work.

51. The cost of girdling 5,131 trees was Rs. 1,775. Full particulars of the localities in which girdling took place and other details will be found in appendix D. No trees were girdled within reserved areas, and consequently a careful selection was not necessary and the cutting of creepers or girdling of other trees was dispensed with.

5.—*Opening out of Streams.*

Obstructions in the Toungbyouk Mintha stream.

52. Blasting with dynamite was undertaken with the view of removing the obstructions in the Toungbyouk Mintha stream of the Tavoy district, and 600 yards were cleared at a cost of Rs. 3,697. It was anticipated by Colonel Seaton that the work could be completed by a single party in two years, but from the experience of this season's work and a further knowledge of the obstructions the undertaking seems likely to prove much more formidable.

6.—*Timber and Produce removed by Purchasers on Trade Permits and on Free Permits.*

Trade permits and tonnage duties.

53. Trade permits were issued for 13,487 trees and tonnage was received on 6,040 tons of timber, showing a very considerable increase over the figures of last year. The trees for which permits were issued were—

Thingan	...	...	...	...	...	1,901
Pyingado	...	...	...	...	...	572
Pyinma	...	...	...	...	...	9,595
Anan ...	...	...	...	...	...	87
Thutsee	...	...	...	...	...	4
Kanyin	...	...	...	...	...	25
In ...	...	...	...	...	...	1,088
Thitpyoo	...	...	...	...	...	291
Padouk	...	...	...	...	...	8
Magalay	...	...	...	...	...	15
Ingyin	...	...	...	...	...	6
				Total	...	13,487

And the 6,040 tons extracted were made up of—

	Tons.
Thingan	1,614
Pyingado	308
Pyinma	3,409
Anan	14
Kanyin	5
In	624
Thitpyoo	29
Magalay	87
Total ...	6,040

Explanation of increase in timber removed under trade permits.

54. The dearness of teak caused a sudden demand for pyinma to spring up in Moulmein, and the extraction of so much timber under permits compared with former years is entirely due to this cause.

Free permits for teak.

55. Free permits, so far as is ascertainable, were granted for 296 logs of teak by the Assistant Commissioner at Papoon, and no credit was afforded to the Department for the considerable quantity of timber used in the construction of the new teak stockade there. The Assistant Commissioner has been several times addressed on the subject, and desired to dispose of teak only in accordance with the forest rules.

Free permits for other reserved trees.

56. In all 7,182 trees of the reserved kinds were given under free permits by the civil authorities: this corresponds with the number granted during the previous year.

Wood-oil.

57. Kanyin-oil yielded—

	Rs.
Amherst district...	50
Tavoy district	1,365
Mergui district	1,749
Total ...	3,164

This is much the same as the amount credited in the previous year. In future an increase may be expected under this head from the tracts recently brought under the provisions of Act VII of 1865 during the year.

7.—*Disposals.*

Disposals by the Salween division and agency.

58. The sale of 22,945 teak logs and pieces was effected and Rs. 2,90,087 were realized; 5,813 logs from the Thoungyin forests sold for Rs. 31-5-11 per log, or Rs. 33 per ton; 1,988 pieces from the Thoungyin forests sold for Rs. 16-3-2 each, or Rs. 31 per ton. The price of other teak pieces averaged Rs. 4-14-11 per piece, or Rs. 19 per ton. Three thousand three hundred and fifty-nine logs of woods of other kinds sold for Rs. 1,06,555. The average prices obtained were—

	Per log.			Per ton.		
	Rs.	A.	P.	Rs.	A.	P.
Thitka	27	7	7	19	0	0
Pyinma	11	1	4	21	0	0
Padouk	78	13	5	105	0	0
Petwoon	12	0	0	80	0	0
Thitpyoo	9	9	0	12	0	0
Pyingado	7	0	0	17	0	0

Conversion of timber.

59. Four hundred and twenty teak logs, as well as 189 unclaimed drift teak logs, were converted in order to supply squares and planks to the gun-carriage factories at Bombay,

Madras, and Futtegarh. Of other kinds, 393 pyingado, five thitya, and one pinleh kanazo were sawn up for sleepers.

	Rs.
Teak squares fetched	... 78 per ton.
Pyingado scantlings fetched	... 57 ,,
Padouk do. do.	... 84 ,,

CHAPTER V.

Financial Results.

1.—Salween and other Forest Divisions.

Receipts and charges of the forest divisions.

60. The accounts of the East Salween, West Salween, Ataran, and South Tenasserim are all incorporated with those of the Salween division. The receipts during the year amounted to Rs. 4,65,644, and the expenditure was Rs. 3,33,329, leaving a surplus of Rs. 1,32,315. This is a great improvement on last year's figures, which gave a surplus of only Rs. 1,569. The different divisions, so far as the system of accounts admits of allotment, contributed to the year's results as follows:—

Division.	Receipts.	Charges.	Surplus.	Deficit.
	Rs.	Rs.	Rs.	Rs.
Direction	46	27,274	...	27,228
Salween proper	81,478	49,875	31,603	...
East Salween	2,82,657	1,32,189	1,50,468	...
West Salween	22,889	32,216	...	9,327
Ataran	47,824	50,349	...	2,525
South Tenasserim { Tavoy ...	30,226	39,520	...	9,294
South Tenasserim { Mergui ...	524	1,906	...	1,382
Total ...	4,65,644	3,33,329	1,82,071	49,756

A detailed summary of revenue and expenditure for the different divisions compiled by the Conservator is given as appendix G.

Outstandings on account of revenue and increased value of timber stock.

61. In addition to the revenue actually realized, Rs. 35,427, mainly due from other departments, were outstanding at the close, as against nothing at the commencement of the year; and the value of the timber stock in depôt was also increased by more than Rs. 57,000. Had these sums been realized during the year, the Ataran and South Tenasserim divisions would have shown a surplus instead of a deficit.

62. Under Ia the increase is due—

Increased revenue from timber extracted by Government Agency.

(*a*) to the larger outturn of teak and the steadily high prices it commanded;

(*b*) to the yield of 4,214 logs of timber of other kinds, which was in excess of last year's yield by 3,228 logs (chiefly thitka);

(*c*) to the outturn of sawn pyingado sleepers from Tavoy.

Increase of revenue on timber and produce removed by purchasers.

63. The receipts under II show an increase over last year of some Rs. 9,000, the South Tenasserim division yielding Rs. 3,142, as against Rs. 271 in the previous year. The remaining Rs. 6,000 are accounted for by the sudden demand for pyinma in Moulmein. There has been an apparent falling-off in the revenue from wood-oil, but this is explained by Rs. 2,500 not being brought into the accounts of the year.

64. The expenditure under AI*a* was Rs. 2,27,123, or Rs. 76,715 more than in the previous year. Timber operations have been extended, more logs brought to depôt, and a corresponding revenue has been realized.

Expenditure on timber works.

65. AVI.—Two elephants were purchased for use in the East Salween division; and there was an increased expenditure on stores, plant, and tools.

Purchase of live and dead stock.

66. AVII.—The new office in Moulmein cost Rs. 7,223, including new roof and repairs; and Rs. 1,417 were spent on blasting obstructions in streams in the South Tenasserim division.

Building and communications.

67. Under AVIII Rs. 19,428 were spent, as against Rs. 11,136 in 1880-81. The excess is chiefly due to payments made on account of works of the previous year; and the amount includes Rs. 4,000 to Rs. 5,000 charged under "other works," which properly belong to timber operations.

Expenditure on demarcation and improvement of reserves.

68. B.—*Establishments.*—Compared with the previous year there was a saving in round figures of Rs. 3,000 on salary of Conservator, while divisional officers cost an additional sum of Rs. 1,000; subordinates, owing to temporary appointments being made permanent, cost Rs. 12,000, instead of Rs. 8,000 in 1880-81; and travelling allowances were Rs. 3,500 more than in the previous year: this was owing to arrears of 1880-81 paid at the commencement of 1881-82.

Increase of expenditure under establishments.

2.—Kado Revenue Division.

69. From the 1st January 1882, in consequence of a memorial submitted to His Excellency the Viceroy on the occasion of His Excellency's visit to Moulmein, the duty on foreign timber imported by the Salween river was reduced from seven per cent. to one per cent. *ad valorem.*

Reduction of duty on foreign timber.

70. During nine months of the year a duty of seven per cent. *ad valorem* was levied on 84,265 logs of foreign teak, and amounted to Rs. 3,19,413; and during the remaining three months a duty of one per cent. *ad valorem* levied on 23,168 logs brought in Rs. 13,464. The duty for the year was therefore Rs. 3,32,877, or Rs. 7,676 in excess of that for 1880-81. The number of logs on which duty was received differs from the number passed out of Kado, because the depôt always contains at the end of the year timber which has paid duty in Moulmein but still has to be removed.

Amount of duty levied on foreign timber.

71. The duty received on timber extracted from leased British forests was Rs. 3,648; and 227 pieces of teak, on which duty had still to be paid, were unpassed at the close of the year.

Duty on timber the produce of British leased forests.

72. The total revenue of the division was Rs. 4,36,317; but this includes Rs. 3,780 registration fees on hammer-marks, as well as Rs. 96,012 receipts on drift timber operations which are managed by this division.

Total receipts of the Kado revenue division.

73. The expenditure on the Kado revenue division, excluding Rs. 43,832 expenses incurred on drift timber, was Rs. 13,519, but this does not include the salary of the Deputy Conservator, which is charged to the Salween division.

Cost of Kado revenue division.

74. It has been presumed that because drift timber is collected and disposed of by the Kado revenue division that the receipts obtained from the sale of unclaimed drift are entirely derived from foreign timber: this is not so, as a considerable proportion of the timber salved, and sold as unclaimed drift, is the produce of British forests.

Unclaimed drift includes timber from British forests.

3.—Drift Timber Operations.

75. The total expenditure of the year under AIII amounted to Rs. 44,661, and the revenue was Rs. 96,864, leaving a surplus of Rs. 52,203. This includes drift timber salved and disposed of at Tavoy and Mergui.

Profit on drift timber operations.

4.—*Summary of Financial Results.*

Financial results of the year's transactions.

76. The financial results of the circle for the year may be tabulated as follows:—

	Receipts.		Charges.		Surplus.	Deficit.
		Rs.		Rs.	Rs.	Rs.
I.—Departmental timber operations ...	I and III	5,39,285	I, III, ½ VI, ½ B, ½ Direction	3,03,815	2,35,420	...
II.—Other revenue ...	II, IV, V	3,62,726	II, IV, ½ VI, IX,			
III.—Formation, protection, and improvement of forests ...	...	...	½ B, ½ Direction.	30,837	3,31,889	...
			½ VI, VII, VIII, ½ B, ½ Direction.	56,028	...	56,028
Total ...	...	9,01,961	...	3,90,680	5,11,281	...

And the revenue and expenditure for the past four years have been—

Years.	Receipts.	Expenditure.	Surplus.
	Rs.	Rs.	Rs.
1878-79	4,82,045	2,23,859	2,58,186
1879-80	5,28,121	2,29,491	2,98,630
1880-81	6,50,061	2,70,591	3,79,470
1881-82	9,01,961	3,90,680	5,11,281

CHAPTER VI.

GENERAL.

Imports and exports of teak from Moulmein.

77. During the year 107,433 logs, or 1,41,710 tons, of teak, valued at Rs. 59,09,112, were imported by the Salween river, and 1,11,306 tons, valued at Rs. 85,21,895, were exported to the following ports:—

	Tons.
United Kingdom	41,762
Bombay	25,504
Bengal	26,329
Madras...	7,598
Provincial ports	8,463
Other countries	6,650

Home prices.

78. Prices in the European market, though slightly lower in July and August, have on the whole only varied between £12 and £13-10-0, while freights increased from £3 to £3-10-0 per ton.

Indian prices.

79. Both at Bombay and Calcutta higher prices were obtainable at the close than at the commencement of the year. The following is a list of prices for the different months:—

Month.	Bombay.				Calcutta.			
	Squares.		*Scantlings.*		*Squares.*		*Scantlings and boards.*	
	From	To	From	To	From	To	From	To
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
April	65	85	76	67	65	85	57	80
May	...	...	...	...	70	90	59	90
June	...	...	...	...	65	90	50	85
September	...	...	...	...	70	95	55	90
October	70	90	80	...	...	...	...	...
November	78	98	85	...	75	110	...	95
December	82	103	88	...	80	120	...	110
January	98	115	98	...	...	...	...	...
February	...	...	95	...	...	...	...	...
March	...	...	...	...	85	...	60	125

80. Trade in timber has been exceptionally brisk, but, as merchants had to pay as much as Rs. 80 and Rs. 95 for 1st class logs in the round, their profits cannot have been very great. Importers have had a good year, and many men who were in difficulties have been able to right themselves.

Trade in teak.

81. The effect of the past year's high prices paid in Moulmein and the reduction of the duty have been to raise the price of timber beyond the frontier somewhat disproportionately, so much as Rs. 50 to Rs. 60 per log, including launching, being demanded in Karennee.

Rise in price of timber beyond the frontier.

82. It may not be out of place to note here that the lower rate of duty, now that the reduction has become known, has been taken advantage of in foreign territory, and consequently affords little or no profit to British subjects either importing or trading in timber.

Reduction of duty taken advantage of beyond the frontier.

83. Two baggage elephants were purchased in March for use in the East Salween division. The two animals in the depôt continued in good health.

Elephants.

84. A new office in Moulmein was purchased and repaired at a cost of Rs. 7,223, exclusive of timber valued at Rs. 1,237. It affords accommodation for the offices of the Conservator and the officers in charge of the Salween, Kado revenue, and Ataran divisions. In the Ataran division a rest-house was built at Natchoung village at a cost of Rs. 307, exclusive of material valued at Rs. 342. A pyingado raised pathway at Kado cost Rs. 322, and Government timber worth Rs. 724 was used in its construction.

Buildings.

85. Mr. H. C. Hill, Deputy Conservator, took over charge of the circle from Colonel Seaton, proceeding on furlough, on the 17th July 1881. Mr. T. H. Aplin, Assistant Conservator, was posted to the South Tenasserim division on the 20th May 1881; and Mr. F. W Thellusson, Assistant Conservator, assumed charge of the Ataran division *vice* Mr. Aplin. Though no serious illnesses have to be reported, the Officiating Conservator, Captain Bingham, and Mr. Aplin all suffered at different times from constant attacks of fever.

Changes in controlling establishment and health of officers.

86. The health of subordinates has been anything but good. Ranger Moung Shway Yeh was incapacitated for work during the greater part of the year. Mr. Legrois, forest-ranger, was ill for several months; and his brother, who was sent out to learn blasting work, died of fever in Tavoy. Mr. F. W. Grady, Superintendent of the Conservator's office, was compelled to take six months' leave on medical certificate.

Health of subordinate establishments.

87. Both officers and subordinates have worked well and given satisfaction to the Officiating Conservator.

Services of officers and subordinates.

MOULMEIN:
The 29th June 1882.

H. C. HILL,
Offg. Conservator of Forests, Tenasserim Circle.

APPENDIX A.

Detailed Record of Progress in the different Divisions of the Tenasserim Circle, 1881-82.

CHAPTER I.

Reserved Forests.

I.—SALWEEN DIVISION.

Proposals for the reservation of an area on the Martaban range of hills.

The Deputy Commissioner, Amherst district, approved of the area on the Martaban range selected last year for reservation being reported on by a civil officer with a view to the formation of a reserve. Mr. Sankey, Assistant Commissioner, and Mr. Thellusson, Assistant Conservator, visited and examined the tract in March, but up to the end of the year the joint report embodying the proposals of these officers had not been received.

II.—EAST SALWEEN DIVISION.

1.—Area and Boundaries.

Increase of State reserves.

2. The area of reserved forest has been increased by the addition of the—

	Square miles.	Acres.
South Myawadee reserve		150
Winsaw reserve	10	..
Moethaway reserve	19	..
Total ..	29	150

making a total area of 177·23 square miles.

Preliminary examination and selection of reserves.

3. The forests drained by the Yat and Oukcha streams on the left bank of the Houngdaraw stream were examined by the divisional officer with a view to the selection of an area suitable for a padouk reserve.

Trees of this valuable species were found to be only sparsely scattered over the tract, valuation surveys giving only some three trees to ten acres. Proposals for a reserve were consequently not submitted.

It may be found feasible to take up an area within easy reach of Kawkareik suitable for the artificial reproduction of padouk.

Final demarcation and inspection of boundaries.

4. The final demarcation of the three reserves mentioned in paragraph 2 was still to be done, sanction being obtained in March only.

The boundaries of the Mehgala, Kyoukket, and Mehkaneh reserves were inspected and cleared, and boards were renewed where missing at a cost of Rs. 339.

Compensation paid to villagers.

5. Compensation, amounting to Rs. 190, was paid to the villagers of Nandaywa for removal from the Kyoukket reserve.

Reserves proposed but not yet sanctioned.

6. The Onekarein, Gawleh, and Balehdo proposed reserves had not been sanctioned at the close of the financial year; considerable delay occurred in the submission of the proposals to the local Government owing to the Deputy Commissioner detaining the papers for a time while he made further inquiries.

Expenditure on account of demarcation of reserves.

7. The expenditure for the year under the head of demarcation amounts to Rs. 5,899 and is made up as follows:—

	Rs.	
Preliminary examination and demarcation	3,781	Chargeable to works reported on in report 1880-81.
Boards and nails	336	
Final demarcation	1,443	
Cost of clearing lines and renewing boards during current year ..	339	
Total ..	5,899	

2.—Protection and Improvement.

Fire-protection of Mehpaleh West reserve.

8. A fire-trace, 24 feet broad, was cleared along the south and west boundaries of the Mehpaleh West reserve at a cost of Rs. 578, or about Rs. 20 per mile.

Fire entered the reserve in March before the line was properly cleared, and burnt over about two square miles before it could be put out.

Breach of forest rules.

9. A toungya was cut within the Kyoukket reserve by a Karen of Pathaw's village and the offence was reported to the Deputy Commissioner, but the man was not punished.

Expenditure under head "Other works."

10. The amount of Rs. 1,279 expended under head "Other works" is made up of Rs. 522 for girdling and Rs. 757 pay of temporary guides, coolies, and elephant-hire, and would have been more appropriately charged to A1*a*.

III.—WEST SALWEEN DIVISION.

1.—Area and Boundaries.

Increase of State reserves.

11. The area of State reserves was increased by the addition of the—

	Square miles.
Upper Mehthalouk reserve	14
Lower do. do.	6
	20

but a modification of the boundary of the Mehwaing reserve diminished the area by 1½ square miles. The total area added to reserves was therefore 18½ square miles.

Compensation paid to villagers.

12. Compensation, amounting to Rs. 125, was paid to four villagers for loss of toungya-grounds in the Mehthalouk reserves.

Reserve proposed not sanctioned.

13. The Pa stream proposed reserve was visited by Mr. J. C. Davis, Assistant Commissioner, and by the divisional officer, and the fuller report called for was submitted to the local Government, but sanction had not been received at the close of the year.

Preliminary examination and selection of reserves.

14. The forests drained by the Myintabyay stream south of Kalado were examined on the suggestion of the Inspector-General by the divisional officer and a suitable tract for a reserve of some 80 to 100 square miles has been selected.

Final demarcation and inspection of boundaries.

15. The final demarcation of the two Mehthalouk reserves was completed at a cost of Rs. 139, of which Rs. 55 represent the price of 273 boundary boards. The boundaries of all reserves were inspected and fallen boards replaced by the foresters.

The boundary of the Mehwaing reserve was altered at a cost of Rs. 5.

2.—Protection and Improvement.

Fire-protection of Sinzweh reserve.

16. Fire-protection was successful over the whole of the Sinzweh reserve, with the exception of 30 acres burnt in the beginning of March. The cause of the fire is not known, but as it broke out on the Myintabyay road it was probably caused by a traveller.

The cost of fire-protection, including the pay and food of the Kamoo coolie establishment for three months, was Rs. 599.

Fire-protection of Wamoo reserve.

17. Fire was kept out of the Wamoo reserve by clearing a line 12 feet broad on the south and by sweeping the Papoon and Kalado road, and the cost was only Rs. 6, the forester in charge doing the work.

Fire-protection of Kaheeloo reserve.

18. The 1,280 acres of the Kaheeloo reserve liable to be burnt over were protected by the forester at a cost of Rs. 21.

Fire-protection of the Mehwaing reserve.

19. The Mehwaing reserve was successfully protected at a cost of Rs. 7. The men of Hamee village, in consideration of the recent modification of the boundary in their favour, gave ready assistance to the forester in clearing along the Kyoonmawlaw stream and the road from there to Kweekyooaing and refused payment.

Fire-protection of Mehnanweh reserve

20. The Mehnanweh reserve was again successfully protected by the forester, assisted by the Karens living inside the reserve, without any expenditure.

Fire-protection of Donedamee reserve.

21. In a similar way the southern portion of the Onekangyee reserve, amounting to about eight square miles, was again protected at a cost of Rs. 37.

The Karens located in the Beelakatkyee reserve protected some five square miles of the northern portion, within which area they are planting teak.

No steps were taken to protect the Tagehloung reserve, but the year was favourable and fire did not enter it.

Teak toungya-plantations in Sinzweh reserve.

22. In the Sinzweh reserve 15 men planted 60 acres, and at the end of the season 43,469 were counted. An average per acre of 724 plants is exceedingly good, as, planted as they are supposed to be in lines 12 feet apart and 4½ feet between each plant, an acre fully stocked would only contain 807 plants. The Karens have in many instances planted at somewhat smaller distances than those laid down, and so in reality there are more failures than a comparison of the above numbers would indicate. Nevertheless the result is most satisfactory. The plants are strong and no regular plantation need be better stocked. The expenditure, including taxes and cost of seed, amounted to Rs. 498, or Rs. 8-4-8 per acre.

About 200 acres of the toungya-plantations of former years in the Sinzweh reserve were cleared and weeded at a cost of Rs. 561 by the Kamoo coolie establishment, consisting of a goung and five coolies.

Teak toungya-plantation in Wamoo reserve.

23. Teak was planted over five acres in the Wamoo reserve at a cost of Rs. 28-8-0, or Rs. 5-11-2 per acre. Countings gave an average of 449 plants per acre.

The old plantations, aggregating nine acres, were weeded in July for Rs. 8-8-0.

Teak toungya-plantations in Mehwaing reserve.

24. The cultivation of teak in this reserve was successful; 30 acres were stocked with 17,760 strong seedlings at a cost of Rs. 180.

An acre of plantation containing 592 plants cost therefore Rs. 6 only.

The plantations of 1879 and 1880, comprising an area of about 75 acres, were cleared in June, and those of 1880 were again gone over in August.

The total cost amounted to Rs. 95-8-0.

Marking limits of plantations and date of planting.

24A. The limits of eight of the yas of 1880 were defined by a path, and boards indicating the year of sowing were put up at a cost of Rs. 21.

Teak toungyas in Mehnanweh reserve.

25. The area cultivated in this reserve was 34 acres, and the seedlings raised averaged 407 to the acre.

The total outlay, including taxes, was Rs. 207, or a little more than Rs. 6 per acre.

The weeding of 50 acres of the plantations of 1879-80 in this reserve cost Rs. 23.

Teak toungyas in Onekangyee reserve.

26. Nineteen acres were successfully planted at a total cost of Rs. 101, or Rs. 5-5-0 per acre. Countings gave an average of 569 plants per acre.

The plantations of former years were weeded over 17 acres of their extent at a cost of Rs. 6; the remaining area was part of the tract burnt in 1880-81 and did not require weeding.

Teak toungyas in the Beelakatkyee reserve.

27. In this reserve plantations, aggregating seven acres, were made at a cost of Rs. 4-6-10 per acre.

Older plantations, comprising 17 acres, were cleared at a cost of Rs. 6.

Cultivation of padouk in toungyas in Kaheeloo reserve.

28. An area of about eight acres was sown with padouk in this reserve at a cost of Rs. 11, and 1,540 plants were found at the time of counting, but some of these were small and suffering from exposure to the sun.

The weeding of 23 acres of teak plantations cost Rs. 11-4-0.

Experimental cultivation of other trees.

29. Plants of *Pithecolobium saman* thrive at Papoon.

Breaches of forest rules.

30. No breaches of the forest rules were discovered within reserves.

IV.—ATARAN DIVISION.

1.—Area and Boundaries.

State reserves.

31. The area of State reserves remained unchanged.

Preliminary examination and selection of areas suitable for reservation

32. It was noticed in last year's annual report that the examination of the Upper Yay forests was not sufficiently advanced at the close of the year to admit of the selection of any definite area. Mr. T. H. Aplin, Assistant Conservator, has since submitted a full report and selected an area about 320 square miles as suitable for the formation of a compact reserve. The principal valuable trees are padouk (*Pterocarpus indicus*), thingan (*Hopea odorata*), pyinma (*Lagerstræmia sp.*), karaway (*Cinnamomum sp.*).

The Deputy Commissioner, Amherst district, approved of the tract being visited and reported on by the demarcation officers, but no civil officer was available and consequently no definite proposals have as yet been submitted.

The divisional officer submitted preliminary proposals for the extension of the Gonegyee and Kyoon stream reserves, but the district officer not approving of the extensions no further steps were taken.

Inspection of boundaries and clearing of lines.

83. The boundaries of the Dalee, Natchoung, Gonegyee, Kyoonchoung, Pakabo, and Maoo reserves were inspected and the boundary paths cleared at a cost of Rs. 38-8-0.

The boards were found to be in a good state of preservation. All trees bordering the lines were blazed and hammer-marked.

2.—Protection and Improvement.

Fire-protection in Dalee reserve.

84. The 800 acres of this reserve were again fire-traced, and this year fire was successfully kept out.

The expenditure on this account was Rs. 71-8-0 and will appear in the accounts for 1882-83.

Fire-protection of Kyoonchoung reserve.

85. The area attempted was the same as last year, and was similarly cut up into six blocks by paths, which were burnt, swept, and regularly patrolled.

The total expenditure amounted to Rs. 87-8-0, charged in the accounts for 1882-83.

No fire entered. The success was in a great measure due to the favourable season, as the clearing of the paths was not properly completed till the middle of April owing to the difficulty of procuring labour.

Teak toungyas in the Kyoon stream.

86. Of the 15 Karens who last year agreed to cultivate teak, 14 remained and planted 25 acres in one compact block.

The seedlings were counted in January and only 3,060 were found. The Karens were dissatisfied with this result and asserted that more than double that number had been visible at the time they cut their paddy. It was therefore arranged with them that a second counting should be made after the first weeding at the commencement of the rains and payment made on the number then found. Seed cost Rs. 55 and taxes Rs. 41-12-0. A small quantity of padouk seed was sown in a portion of the ya, but only a few plants were found to have sprung up.

Teak toungyas in Gonegyee reserve.

87. The 10 families whom it was proposed to settle within the Gonegyee reserve removed at the time of the census operations and as yet have not been prevailed upon to return.

Teak toungyas in Dalee reserve.

88. An area of nine acres was cultivated in this reserve and was found to contain 4,840 plants, or 538 per acre. The system of planting in lines was here very imperfectly carried out, but the area is well stocked. The total cost was Rs. 45, including the collection of seed. The older plantations, 46 acres, were weeded where necessary at a cost of Rs. 13-8-0. These plantations are well grown, but not entirely stocked. They will require no weeding in future.

Thingannyoenoung plantation of 1856.

89. No works of improvement were carried out in this plantation.

Pithecolobium saman in the Kyoonchoung reserve.

90. Some 300 plants of the rain-tree were put out along the main path passing through the reserve at a cost of Rs. 12.

Mahogany plantation near Amherst.

91. The plot of ground of 1½ acres near Amherst taken up for the experimental plantation of mahogany remains unextended. Twenty more plants were set out in August, making a total of 100, and of these 90 were alive and thriving at the close of the year; their average height was 4 feet 11 inches, the highest plants measuring 8 feet in height and 3 inches in circumference. More than half had suffered either by having their terminal shoots eaten off or their branches bored by insects.

An outlay of Rs. 65-8-0 was incurred on the felling of 44 large trees, originally left for shade, and on repairs to the fence, bringing the total expenditure from the commencement up to Rs. 295-4-0.

Mahogany trees planted in office compound, Moulmein.

92. Five plants were put out in the office compound at Moulmein and are thriving.

Expenditure under AVIIIF. "Other works."

93. The expenditure under AVIIIF amounts to Rs. 1,801, and should have been charged to A1*a*, "Timber operations."

Breaches of forest rules.

94. The only breach of forest rules brought to notice was the unauthorized cutting by a Karen of a ya within the Kyoon stream reserve, and this man was not prosecuted owing to his absconding.

Buildings.

95. The temporary huts are quite useless and have not been replaced. The divisional officer has been asked to submit proposals for the erection of more permanent rest-houses.

V.—SOUTH TENASSERIM DIVISION.

Mintha proposed reserve.

46. Mr. C. J. A. Duke, Deputy Commissioner, Tavoy district, and Mr. T. H. Aplin, Assistant Conservator, visited in December and submitted definite proposals for the reservation of an area of 100 square miles, including an area which it is intended to allot with certain restrictions to 15 families of Karens. Sanction, however, had not been accorded at the close of the year.

The expenditure on this work, including travelling allowance of civil officer, was Rs. 443.

Preliminary examination and selection of reserves.

47. The Assistant Conservator has examined the forests at the sources of the Tavoy river with a view to the selection of reserves there. This has occupied his time from the beginning of February to the end of the dry season, with the exception of two breaches at the commencement of March and April, when his presence was required in Tavoy.

Valuation surveys and countings of valuable trees have been made over an area calculated at about 500 square miles. Maps will be prepared and preliminary proposals made as regards reserves in the area thus surveyed during the ensuing rainy season. As regards the area of the reserves to be thus preliminarily proposed, it is impossible to give any thing like an accurate estimate until the maps are completed.

As there is no teak in this area (nor indeed in any other part of the Tavoy district) the reserves will be made in view of conserving other kinds of valuable woods. The most valuable kinds are pyingado (*Xylia dolabriformis*), thingan (*Hopea odorata*), pyinma (*Lagerstræmia sp.*), thitka (*Pentacme siamensis*), thitkado (*Cedrela sp.*), karaway (*Cinnamomum sp.*), and kanzan (*Bassia sp.*), the last two of these being highly esteemed locally at Tavoy.

Cultivation of *Musa textilis* at Tavoy.

48. Fifteen young shoots of the *Musa textilis* (Manilla cordage plantain) were sent to Tavoy at the commencement of July 1881. As no suitable place could be found for the formation of an experimental plantation within a convenient distance of the town, 12 of these plants were put out in Mr. Aplin's compound. The remaining three were given to an old Burman gardener, who planted them in his garden on the hill at the back of the town. During the month of December the plants were watered every morning, but for the rest of the dry season they were allowed to take care of themselves. Five plants died, and the remaining seven measured on the 15th May 1882:—

Number of plant.	Height of stem to where the leaves branch off.		Length of full-grown leaves.		Girth of stem at six inches from ground.	Remarks.
	Ft.	in.	Ft.	in.	In.	
1	2	6	3	4	8	Has sent out two vigorous shoots from roots.
2	2	1	2	9	7	Has sent out one vigorous shoot from roots.
3	1	6	1	6	4	
4	2	0	2	5	5	One vigorous young shoot from roots.
5	1	11	2	4	7	Ditto ditto ditto.
6	2	1	2	10	7	
7	1	7	2	0	5	

Of the three plants presented to a Burman gardener only one has survived, and it has but a height of one foot and is apparently in an unhealthy condition. Forty rupees were spent on this experiment.

Alteration in the area taken up for plantation at Mergui

49. The tract reported in last year's annual report as 90 acres is, according to the measurement of the revenue surveyor, 108 acres. Of this area about six acres have been utilized by the Deputy Commissioner for the experimental cultivation of coffee, pepper, vanilla, and cocoa.

Cultivation of the Para India rubber (*Hevea brasiliensis*) at Mergui.

50. The eight plants in the forest office compound have attained the following measurements:—

Height.		Girth at one foot from the ground.	
Ft.	in.	Ft.	in.
32	11	1	4
36	8	1	4
37	3	1	4½
27	2	1	1½
18	1	0	10½
28	2	0	9
9	11	0	9
14	9	0	5

The smallest of these will be cut down and used for cuttings. Attempts to propagate this species by cuttings have so far failed. Three plants only were raised in 1882, and only 15 of the 50 reported as thriving last year are now alive.

The failures under glass are much the same as those in shaded beds; the cuttings do not strike readily and are most liable to be attacked by ants. Efforts will still be made to attain more success, as cuttings of this species are said to take root without difficulty in Ceylon.

The 60 plants reported as established are all alive and making fair growth. Some few of them have been cut back to furnish cuttings. As yet none of the older trees have flowered.

Cultivation of *Castilloa elastica* at Mergui.

51. The two plants of this valuable species have grown considerably and now measure—

Height. Ft.	in.	Girth at one foot.
1	11	10½
5	6	7½

Cuttings from the branches have been tried, but they did not take root.

Cultivation of ceara (*Manihot Glaziovii*) at Mergui.

52. The number of plants now put out amounts to 1,250 in the cleared area; of these 624 are the survivors of what were planted out last rains. Twenty-eight cuttings made from the branches of trees broken down by deer and storms have taken root. It has been observed that some inches of the terminal shoots have died off each hot weather, resulting in the throwing out of a bunch of side shoots, which in their turn are also cut back and made to branch again. This has the effect of giving a quaint appearance to the tree as well as shortening its yearly growth. Captain Butler has had a number of seedlings put out under the high forest, and the cover has kept their terminal shoots from being burnt off. Some however have died, and the remaing 129 are frail and wanting in vigour. All the older trees are seeding, and 4,000 seeds were gathered in December.

The area originally cleared will be planted up with ceara, if possible, this year, for it is covered with a dense young growth that will become more difficult and expensive to clear every year. With the view of expediting the work sowing at stake will be tried, but only on a small scale, until it is ascertained whether insects carry off the seed.

Cultivation of mahogany at Mergui.

53. The mahogany plants have suffered considerably from the attacks of insects: 53 of the 100 reported last year are alive, and only 28 of them can be said to be healthy. Some trees have their terminal shoots eaten off, while others are attacked just above the collar and simply girdled; others again are bored along the whole length of their stem.

Cultivation of other species at Mergui.

54. The solitary cocoa plant died.

The two cuttings of vanilla have made no progress, but since their removal, three months ago, to within the high forest they appear healthier. Captain Butler has a number of plants, the largest of which is 15 feet high, all growing splendidly under cover.

Twenty-two of the 32 akyaw plants are now to be found; 10 are said to have been destroyed by the elephants of the Survey Department, which were allowed to make a path along the boundary on which the akyaw were planted out.

Sixty-five cuttings of *Ficus macrophilla* were received from Singapore in July 1881; although they were green on arrival they failed to establish themselves or were neglected, and four plants in the plantation and one in Captain Butler's garden are the only survivors; these are thriving.

Pithecolobium saman seedlings have been set out to the number of 32, and 19 of the 24 reported last year are living, but are stunted and of irregular growth. One hundred and ten seedlings remain to be set out.

Seven hundred and fifty-six plants of *Broussonetia papyrifera* (*Malainben*) have been raised from seed, and of these 71 have been set out; the remainder will be planted out 10 feet apart in the low ground occupied by the *Hevea* trees. Thirty-four plants of *Musa textilis* (Manilla hemp) were received from Moulmein on the 6th September 1881. All have died or disappeared, except one sickly individual. They were planted under cover, which was probably a mistake, as there the soil is cold and clayey. An exposed situation and sandy soil is said to suit the plant in the Rangoon garden. Monkeys have contributed to the failure by breaking off the tender shoots as soon as they appeared.

Expenditure on the experimental plantation at Mergui.

55. The total expenditure during the year was as follows:—

	Rs.
Establishment	976
Coolies	774
Miscellaneous	88
Total ..	1,838

CHAPTER II.

YIELD AND WORKING.

I.—Timber and other Forest Produce extracted by Government agency.

Teak extracted from Salween division.

56. The teak timber extracted by Government agency from this division consisted mainly of pieces and crooks, 4,365 of which were obtained from the Lower Salween forests and 345 from the Pandaw forest, making a total of 4,710. Four logs were obtained by purchase in order to supply 18-inch planks to the Fatehgarh Gun-carriage Manufactory at a cost of Rs 156.

Timber of other kinds extracted from Salween division.

57. Twenty-nine logs of thitka were extracted from the Yinbaing forests, and the division yielded 321 pyingado pieces in addition to 2,553 large and 33 small sleepers converted in the forests.

Cost of extraction.

58. The average cost of extraction of the teak pieces was Rs. 2-12-10 per piece, of the thitka logs Rs. 4-6-0 each, and of the pyingado logs Rs. 4-2-11.

Yield of pyingado sleepers and scantlings.

59. Two hundred and sixty-four large-sized sleepers were converted in depôt and 254 sent to Calcutta, 10 were disposed of at Moulmein together with 33 converted in the forests and brought out as an experiment by a contractor. Each sleeper cost, delivered in Calcutta, Rs. 3-4-9, and sold for Rs. 3-8-6. Of a total of 3,672 small sleepers received in depôt, 2,553 were converted in the forest, 290 were obtained from 320 undersized large sleepers received from Tavoy, and 829 were sawn up at depôt. The disposals were 2,160 at Rangoon and 921 rejected at Moulmein. Eight hundred and thirty cubic feet of pyingado scantlings were sawn up from the off-cuts at a cost of Rs. 16 per ton.

Teak extracted from the East Salween division.

60. Nine thousand six hundred and twenty-six teak logs and pieces, including 8,207 logs and pieces of timber of former years neaped and in transit, were received in depôt from the Thoungyin forests, 4,652 teak pieces were extracted from the Hlaingbweh forests, and 29 logs from the Houngdaraw forests.

Yield of the Thoungyin forests in teak.

61. The contractor, Saya Pa Theh, earned Rs. 63,934 on 7,691 teak logs and pieces felled, dragged, and launched in the Thoungyin, 546 other logs were felled and dragged but not launched, and 41 were found not to float, making a total of 587 logs on which no payment was made. During the year Rs. 46,127 only were disbursed; the remaining Rs. 17,807, amount due on 1,806 logs, were paid in April.

Neaped timber.

62. The yield of the Thoungyin forests is shown at 7,691 logs and pieces, and of these 6,272 were still in transit and neaped at the close of the year.

The following is a classification statement of Thoungyin timber for 1881-82:—

Particulars.		Logs and pieces.		Amount paid for working.
		Each class.	Total.	
				Rs. A. P.
Short pieces ...	Sound	274		1,422 0 0
	Unsound	136		512 0 0
	Inferior	24		48 0 0
			434	
Yathits ...	Sound	622		2,488 0 0
	Unsound	169		450 10 8
	Inferior	19		88 0 0
			810	
Loozas ...	Sound	1,806		17,807 4 0
	Unsound	1,037		6,867 10 8
	Inferior	274		548 0 0
			3,117	
Doogyees ...	Sound	2,094		24,977 8 0
	Unsound	1,063		8,484 10 8
	Inferior	170	3,330	340 0 0
Total ...		...	7,691	63,933 12 0

Cost of extraction of teak pieces for the Houngdaraw and Hlaingbweh forests.

63. Teak crooks and pieces from the Hlaingbweh forests cost on an average Rs. 2-13-10 each; and 29 logs from the Houngdaraw forests were extracted for Rs. 9-9-0 each.

Extraction of other woods from the East Salween division.

64. In all 1,885 logs of timber other than teak were brought to depôt. They consisted of—

	Logs.
Thitka	1,340
Padouk	217
Thitpyoo	270
Pyinma	58

and were yielded by the Houngdaraw and Hlaingbweh forests.

The average cost of extraction was—

	Rs.	A.	P.	
Thitka	11	14	6	per log.
Padouk	8	10	9	do.
Thitpyoo	5	14	2	do.
Pyinma	6	0	0	do.

Teak extracted from West Salween forests.

65. Six logs and pieces were received from the Upper Salween and Yoonzalin and 3,862 pieces were brought down from the Donedamee forests at a total cost of Rs. 14,921, or Rs. 3-13-9 per piece.

Cost of extraction of other woods from the West Salween forests.

66. The charges on the extraction from the West Salween forests of 170 thitpyoo 92 pyingado, and 40 thitkado logs were—

Pyingado	7	6	2	per log.
Thitpyoo	2	6	9	do.
Thitkado	10	10	2	do.

Teak extracted from the Ataran forests.

67. The Ataran forests yielded 1,748 teak pieces, which cost Rs. 8,020, or Rs. 4-9-4 each.

Extraction of woods other than teak from the Ataran forests.

68. Of other kinds, 942 thitka, 377 padouk, 289 pyinma, 5 thitpyoo, 12 petwoon, 25 thingan, 14 sit, 13 ingyin, logs, as well as 61 cubic feet of padouk planking, were extracted at the following rates: —

	Rs.	A.	P.	
Thitka	11	6	1	per log.
Padouk	15	10	10	do.
Pyinma	11	5	1	do.
Thitpyoo	6	0	0	do.
Petwoon	7	5	4	do.
Thingan	12	0	0	do.
Sit	9	0	0	do.
Ingyin	12	0	0	do.
Padouk planks	18	7	0	per ton.

Yield of South Tenasserim division.

69. There is no teak in this division, and the yield of the forests marked by Government agency amounts to 3,371 pyingado logs extracted at an estimated cost of Rs. 6-8-0 per log for conversion into sleepers. Payment however was made on the outturn of sleepers, —Rs. 140 per 100 small sleepers accepted in Rangoon, and Rs. 2-2-0 per large sleeper delivered on board the steamer *Tavoy*.

During the year 19,825 small sleepers, including 1,130 in transit (omitted from Form No. 62) were shipped to Rangoon, and of these 648 were rejected, leaving a balance of 19,177. The rejections were sold and their value, deducting expenses, paid over in full to the contractors.

Of large sleepers 2,437 were cut, and of these 320 rejected in Moulmein and re-sawn into small sleepers. Two thousand one hundred and seventeen were shipped to Calcutta at a cost of Rs. 3-7-6, including freight and transhipment in Moulmein.

Owing to rejections no profit made on large sleepers.

70. Owing to numerous rejections early in the year and before an officer had been appointed to the division, the average price realized per sleeper of those sold during the year in Calcutta was only Rs. 3-5-7.

Arrangements for continuing the conversion of large sleepers.

71. The sound sleeper is worth Rs. 4 to Rs. 4-8-0 in Calcutta, and arrangements have now been made with the British India Steam Navigation Company to ship sleepers direct from Tavoy to Calcutta at Rs. 17-8-0 per ton. The cost of converting and putting on board at Singoobyin will be Rs. 2-4-0 and, adding freight, Rs. 1-3-6, the cost per sleeper will be as now Rs. 3-7-6 delivered in Calcutta. This will give a fair margin for the price of the timber and for a reasonable number of rejections.

Yield of scantlings.

72. This division also yielded 21 tons of pyingado scantlings, costing Rs. 16 per ton, and 12 padouk planks at a cost of extraction and conversion of Rs. 48.

4.—Girdling operations.

Report includes all trees girdled during the season.

73. Completion reports having been received, it will be convenient to include all trees girdled up to the close of the work.

Timber girdled in Salween division.

74. Two hundred sit (*Albizzia procera*) were killed in this division at a cost of Rs. 50.

Timber girdled in East Salween division.

75. Girdling was limited to the fifth compartments of the division divided as suggested by Dr. Brandis and no trees were killed within reserves.

Trees were girdled in the following forests :—

Hlainglweh	800	teak trees at a cost of	Rs. 204.
Houngdaraw	103	ditto	„ 27
Lower Thoungyin	1,054	ditto	„ 501
Total ..	1,957		
Houngdaraw	1,000	pyinma trees at a cost of	Rs. 322
Ditto	200	padouk ditto	„ 122

Trees girdled in West Salween division.

76. In the Upper Salween forests and north-west of the Upper Mekthalouk reserve 272 teak trees were killed outside reserves at a cost of Rs. 68. The girdling of 201 toukkyan and 507 pyinma trees in the Donedamee forests cost Rs. 212.

Trees girdled in the Ataran division.

77. No teak was girdled in this division. Of 850 trees of other kinds ordered to be girdled, only the following were killed owing to labour not being procurable :—

Padouk	107
Ingyin thitya	109
Petwoon	155
Oukchinza	39
Total ..	410

The expenditure on this account was Rs. 142.

Trees girdled in the South Tenasserim division.

78. Orders were issued for the girdling of 500 trees, but, owing to labour not being procurable and the foresters falling sick, only the following were killed :—

Pyinma	150
Thingan	150
Manecawga	39
Kyehzeh	11
Karaway	2
Kanzaw	3
Magalay	8
Chay	12
Total ..	375

at a cost of Rs. 127.

5.—Removal of Obstructions in Streams.

Blasting operations in the South Tenasserim division.

79. Blasting operations were commenced on the Mintha stream, a tributary of the Toungbyouk, down which all timber to be extracted from the proposed Mintha reserve must be floated out. Major Seaton had visited the obstructions at the upper and lower parts and also in the centre, and was of opinion that the native reports of the size and extent of the obstructions were much exaggerated, and that two seasons ought to suffice for their removal by a blasting party of the ordinary strength, namely, one overseer, one goung, and about a dozen coolies. Work was commenced only on the 12th December, and Mr. Vercoe, an expert sent down by the Company supplying the dynamite, spent some days on the spot instructing the overseer and coolies.

The rock was found to be a fine hard granite, which immediately blunted the tools used for jumping holes in it.

In March many of the men were ill with fever and Mr. Legrois, employed as an overseer, died on the 26th after four days' illness. At the commencement of April Mr. deCosta, the overseer, could no longer carry on the work owing to the prevalence of fever amongst the party, he himself being also laid up with it.

Amount of work done.

80. Forty-two rocks were broken up, and the bed of the river was cleared for a distance of about 600 yards. Within this distance the obstructions had consisted of—

	Length in feet.
(1) Obstructions almost completely blocking the stream ...	500
(2) Obstructions partially blocking stream (generally single rocks)	300
(3) Without any obstructions of any sort occurring ...	1,000
Total ...	1,800

Considerable time and labour were expended in breaking up and removing a single large rock, which lay across the stream in such a manner as to completely obstruct it, and the complete removal of which was absolutely necessary.

Cost of blasting.

81. The total cost of blasting operation was—

	Rs.
Pay of overseer and coolies, including smiths	2,107
Elephant, cart, and boat hire	236
Cost of 500lbs. of dynamite and detonators	950
Cost of tools, &c.	404
Total ...	3,697

The above does not include the cost of 20 cases of dynamite (1,000lbs.) with fuse and detonators which are still in store.

6.—Timber removed by Purchasers on Trade Permits and on Free Permits; also Timber passing Revenue-stations.

Timber extracted under trade permits.

82. The following tables, *A* and *B*, give in a concise form the number of trees of the different kinds for which permits were issued in the several divisions, and also the number of logs worked out and tonnage received:—

A.—*Trade permits issued and felling fees realized in the different divisions during the year 1881-82.*

Division.	Thingan.		Pyingado.		Anan.		Theitsee.		Kanyin.		In.		Pyinma.		Theitpyoo.		Padouk.		Magalay, a kind of Thingan.		Ingyin.		Total trees.	Total revenue.
	Number of trees.	Fees.	Number of trees.	Fees.	Number of trees.	Fees.	Number of trees.	Fees.	Number of trees.	Fees.	Number of trees.	Fees.	Number of trees.	Fees.	Number of trees.	Fees.	Number of trees.	Fees.	Number of trees.	Fees.	Number of trees.	Fees.		
		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.		Rs. A. P.
Salween	949	121 0 0	99	49 8 0	...	...	4	2 0 0	...	...	115	26 12 0	3,543	885 12 0	58	29 0 0	...	...	...	...	...	...	4,061	1,116 0 0
East Salween ...	480	240 0 0	...	...	...	...	...	...	...	...	15	3 12 0	1,812	453 0 0	...	...	...	...	...	...	...	...	2,307	696 12 0
West Salween ...	131	65 8 0	17	8 8 0	...	...	...	...	...	...	102	25 8 0	880	220 0 0	233	116 8 0	...	...	...	...	...	...	1,363	436 0 0
Ataran	877	438 8 0	336	168 0 0	37	18 8 0	...	...	25	12 8 0	805	201 8 0	3,150	787 8 0	...	...	...	...	...	...	...	...	5,231	1,626 8 0
Tavoy	85	42 8 0	120	58 0 0	...	...	...	...	...	...	...	...	201	50 12 0	...	...	3	1 8 0	15	7 8 0	6	3 0 0	430	*157 4 0
Mergui	86	28 4 0	...	...	...	...	...	...	...	...	...	...	9	2 4 0	...	...	...	...	...	...	...	...	95	30 8 0
Grand Total ...	1,901	935 12 0	572	278 0 0	37	18 8 0	4	2 0 0	25	12 8 0	1,098	259 8 0	9,595	2,399 4 0	291	145 8 0	3	1 8 0	15	7 8 0	6	3 0 0	13,487	4,063 0 0

*This includes book transfer of Rs. 19-8-0

B.—*Tonnage realized on trade permits by the different divisions during the year 1881-82.*

Division.	In.			Pyinma.			Theingan.			Anan.			Theitpyoo.			Magalay.			Kanyin.			Pyingado.			Total logs.	Total tons.	Total revenue.	Remarks.
	Number of logs.	Tons.	Amount of duty.	Number of logs.	Tons.	Amount of duty.	Number of logs.	Tons.	Amount of duty.	Number of logs.	Tons.	Amount of duty.	Number of logs.	Tons.	Amount of duty.	Number of logs.	Tons.	Amount of duty.	Number of logs.	Tons.	Amount of duty	Number of logs.	Tons.	Amount of duty.				
			Rs. A.			Rs. A.			Rs. A.			Rs. A.			Rs. A.			Rs. A.			Rs. A.			Rs. A.			Rs. A. P.	
Logs extracted on permits of previous years.																											
Salween	66	26·44	53 13	335	325·14	650 10	9	13·14	60 5	...	...	...	8	5·12	23 10	...	...	...	...	...	...	...	...	...	418	370·34	788 6 0	
East Salween ...	16	25·33	51 6	27	35·15	70 11	80	221·46	992 9	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	123	282·44	1,114 10 0	
West Salween..	50	29·45	59 15	148	94·17	188 15	12	9·37	42 5	...	...	...	...	...	...	...	...	...	..	...	...	30	9·24	41 15	240	143·23	333 2 0	
Ataran ...	659	29·95	598 8	198	160·30	321 13	131	155·42	715 2	...	...	...	...	..	...	..	...	...	...	...	...	132	57·31	259 15	1,120	673·8	1,895 6 0	
Logs extracted on permits of this year.																											
Salween ...	30	9·45	19 14	1,045	762·33	1,526 14	12	13·15	60 1	...	..	...	14	11·26	51 15	...	...	...	...	...	...	27	11·46	53 13	1,128	809·15	1,712 9 0	
...st Salween ..	...	..	...	604	668·26	1,337 11	218	490·33	2,216 10	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	912	1,159·9	3,554 5 0	
West Salween...	102	60·19	120 14	535	404·35	809 11	56	76·7	344 9	...	...	..	17	11·40	53 3	...	...	...	...	...	...	30	10·19	47 13	740	563·20	1,376 2 9	
Ataran ..	227	172·25	346 10	930	711·47	1,485 8	248	313·16	1,360 10	25	9·36	44 0	...	...	...			..	...	...	...	...	...	...	1,430	1,207·24	3,236 12 0	
Tavoy ...	...	...	...	1,038	244·23	488 15	1,268	257·48	1,160 12	30	4·6	18 9	...	...	...	44	36·48	166 5	...	...	...	1,008	2	986 11	3,388	762·18	2,821 6 1	Rs. 84-11-0 credited in April 1882.
Mergui ...	...	...	...	2	1·2	2 1	54	·62	209 7	...	...	..	.	...	...	...	...	...	1	4·13	18 9	...	..	..	64	67·15	230 2 3	Rs. 11-13-0 credited in April 1882.
Total ..	1,150	624·15	1,251 0	4,959	3,408·42	6,882 13	2,088	1,614·8	7,163 7	55	13·42	62 9	39	28·28	128 12	44	36·48	166 5	1	4·13	18 9	1,227	308·12	1,390 4	9,563	6,039·10	17,062 13 1	

83. In all free permits were granted for trees of the reserved kinds as follows :—

Division.	Thingan.	Pyingado.	Pyinma.	In.	Ingyin.	Thitya.	Thitkado.	Anan.	Thitto.	Kanyin.	Total.
Salween	...	344	20	88	...	...	...	...	...	...	452
East Salween ...	4	600	108	98	...	5	10	...	...	...	820
West Salween ...	4	422	220	63	50	...	...	10	...	...	769
Ataran	28	2,845	634	487	55	197	...	8	...	...	4,249
South Tenasserim. Tavoy ...	40	646	...	...	...	...	17	2	40	...	745
South Tenasserim. Mergui ...	54	20	22	...	...	...	...	14	...	37	147
Total ...	125	4,877	1,004	731	105	202	27	34	40	37	7,182

84. Free grants of teak timber were given in Papoon for 296 logs and pieces, and the new stockade there was built of teak taken by the Deputy Commissioner, of which no account was kept, from the forests immediately south of Papoon.

85. During the eight months (1st August 1881 to 31st March 1882) 5,815 logs passed the Sinzeik revenue station above Tavoy. They comprised chiefly the following kinds :—

Pyinkado.	Manthin.
Karaway.	Thingan.
Kanzaw.	Kyehzeh.
Thitto.	

7.—Minor Forest Produce.

Minor forest produce in the Amherst district.

86. Two permits were issued by the Deputy Commissioner, Amherst district, for wood-oil, and Rs. 50 were realized thereon. No revenue was received from the Salween district.

Minor forest produce in the South Tenasserim division.

87. By the sale of wood-oil in the Tavoy district Rs. 1,365 were realized, but of this sum Rs. 704 had still to be credited at the close of the year.

The Deputy Commissioner lets out the right to collect wood-oil over certain tracts yearly, and now that the whole district is subject to the provisions of Act VII of 1865 an increase in revenue may be expected.

In the Mergui district Rs. 1,749 were realized from the same source. Here collectors are charged Rs. 2-8-0, or Rs. 5 each, according to the accessibility of the forest and the abundance of kanyin trees.

8.—Yield of Government Forests worked by Lease-holders.

Yield of the Pandaw and Meeteegeik leased forests.

88. From the Pandaw forests 431 teak pieces and crooks, aggregating 215 tons, were extracted.

The Meeteegeik and Meeteegeik Kodoogweh forests yielded 1,092 teak logs and pieces, cubing 1,607 tons, and also 278 logs, or 292 tons of thitka.

MOULMEIN :
The 29th June 1882.

H. C. HILL,
Offg. Conservator of Forests, Tenasserim Circle.

REPORT

ON

THE FOREST ADMINISTRATION

OF

BRITISH BURMA

For the year 1881-82.

BY

B. Ribbentrop, Esq., Conservator of Forests.

PEGU CIRCLE.

CHAPTER I.

RESERVED FORESTS.

1.—Formation of Reserves.

Area of State reserves in the beginning of the year.

AT the beginning of the year the Pegu circle contained 1,652 square miles of reserves, some portion of which are subject to limited, defined, and recorded minor rights, such as the use of bamboos for home consumption for a certain number of houses, grazing on certain areas for a certain number of cattle, &c., rights which have been individually considered and found harmless to the future well-being of the forest. Besides these reserves 248·5 square miles of State reserves had been created, subject to toungya cultivation, under the restriction that no teak trees above 18 inches girth shall be destroyed.

State reserves sanctioned during the year.

2. Since then the following reserves have been added :—

Forest division.	Name.	Area free of toungya.	Karen area.	Number and date of notification.
Prome division ...	Saingdo	1·9	...	No. 39F., dated 20th June 1881.
(Thayetmyo district) ...	Thabala	9·5	...	No. 40F., dated 20th June 1881.
	Ngawet	5·0	...	No. 84F., dated 29th September 1881.
	Mindone Yoma ...	260·0	...	No. 88F., dated 29th September 1881.
	Thayet Yoma extension ...	8·	...	No. 17F., dated 9th March 1882.
(Prome district) ...	North, Middle, and South Nawin	109·5	43·0	No. 78F., dated 15th September 1881.
Rangoon division ...	Upper Zamayee ...	139·5	88·5	No. 76F., dated 15th September 1881.
(Rangoon district) ...	Lower Zamayee ...	156·5	18·5	No. 77F., dated 15th September 1881.
Toungoo division ...	Kyoukmasin	32·0	...	No. 81F., dated 23rd September 1881.
(Toungoo district) ...	Saing	101·0	...	No. 82F., dated 23rd September 1881.
	Total ...	817·9	150·	

The boundaries sanctioned for the three Nawins however re-include 30 square miles of reserves already sanctioned, which have to be deducted from the grand total, which consequently represents at the end of the year 2,440 square miles of State reserves free of toungya privileges and 398·5 square miles of State reserves burdened with toungya rights.

Description of newly-sanctioned State reserves.

3. Of these reserves, the Saingdo, Thabala, and Ngawet forests are the only remnants of the Lower Mindone valley teak forest, which situated on steep rocky ground, unsuitable even for toungya cultivation, escaped the general destruction. They contain a large proportion of teak of the younger classes, which however on account of the situation are of slow growth.

The Mindone and Hlowa Yoma forests, sanctioned as the Mindone Yoma reserve are large blocks extending from the ridge of the Arakan Yoma down to the cultivation on the Mindone stream. They contain a large variety of forests, most of which are however as yet of little value, teak-producing forest growth being but sparsely represented; but, on the other hand, the sources of most streamlets watering the Mindone valley are situated within this area.

The three Nawin reserves are almost throughout teak-producing and teak of a very superior growth. Parts of these forests are miserably cut about by toungya cultivators, but they are vigorous enough to outgrow the maltreatment they have experienced. The main objection to these reserves is that, bound by population, they could not be extended farther into the plains, where a belt of varying breadth of excellent teak ground underlies them nearly their whole length. A portion of three square miles of this valuable belt has again been obtained this year by compensating the village of Kyoukkway at their own request for removal from the vicinity of the Thayetmyo Yoma reserve and by consequent alteration of its boundary. The reservation of the three Nawins has taken 10 years, which may serve as a warning to all who are concerned not to undertake the creation of reserves on any other basis than the very words and spirit of the rules in existence and according to a fixed system of procedure and on detailed local inquiries only. The three Nawins were originally proposed partly as special and partly as ordinary reserves. No special enquiry was deemed necessary for the creation of ordinary reserves; and, what was still worse, the definition of ordinary reserves had been misinterpreted. The consequence was endless correspondence, and the reservation was only completed when the question was re-opened *de novo*.

The Lower Zamayee reserve contains extensive teak tracts, and large portions of it are in my opinion well situated for fire-protected forests with a view to the improvement of their character by teak toungyas, dibbling, and other modes of reproduction. A Karen population, rather attached to the Forest Department than otherwise, are on the spot, difficulty of constant supervision being the only drawback.

The Upper Zamayee reserve contains the sources of the Pegu stream and many of its main feeders, but its teak-growing areas are not very extensive.

The Kyoukmasin reserve is the tail-end within our boundaries of the famous foreign Ningyan forests. The reserve contains good teak forests, but is too far from head-quarters for constant supervision and its export line lies through Upper Burma.

The Saing reserve contains most excellent teak forests on an average perhaps richer and better grown than any other large extent of forest in the Pegu circle. The northern portion of the reserve is drained through Upper Burma, which is therefore the natural line of exploitation. The north-west corner of the proposed area, about four square miles, containing, according to a subsequent counting, 3,200 I class trees, and trees of the younger classes in proportion, was, I regret very much, not sanctioned.

Influence of reservation on the toungya-cutting population.

4. The feeling of irritation and dissatisfaction amongst the Karens caused by the reservation of new large forest areas which is almost unavoidable is in the Pegu circle of a very passing nature, as it is almost invariably based on nothing more solid than sentimentality and is not due to any practical requirements or necessity.

The Karens themselves say that once they were like jungle-fowl, hiding where they liked, scratching the earth here and there and putting in a grain of rice and eating what came of it if the nats permitted, but that now the Forest Depa rtment put them into boundaries here and boundaries there and that they feel like pigs in a pen. But after a certain time has elapsed they rarely deny

that their latter state is preferable to their former, more especially in or near fire-traced reserves where work is constantly obtainable. With the careful way in which enquiries are made and privileges and rights granted, we have a right to expect such favourable results.

Completion of reservation on the west slopes of the Pegu Yoma.

5. The reservation on the west slope of the Pegu Yoma may be considered completed. No doubt there are here and there small valuable tracts of good teak-producing forests jutting out from the Yoma which no opportunity should be lost to reserve wherever possible, but from a general point of view we have got all we can get and all we require. Our reserves it is true exclude some of the best teak-producing country underlying Nawin and Thayetmyo East Yoma reserve, but this area was occupied by as dense a toungya-cutting population as can conveniently exist on a given area before the Forest Department came into the market.

Settlement of reserves carried on during the year.

6. During the year three demarcation parties took the field in the Prome, Tharrawaddy, and Rangoon divisions, consisting in each instance of the Assistant Commissioner in charge of the sub-division and the local forest officer. Definite proposals for the reservation of parts of the Tarokemaw and Pounglin forests have been submitted; but the enquiries made with regard to cutch reserves in the Thayetmyo district were not sufficiently searching, or at least were not shown by the proceedings to have been sufficiently searching, to serve for anything else than a preliminary report.

The Wabalatkwin forest also was proposed for reservation by the late Deputy Commissioner of Shwaygyin and the local forest officer.

In the Toungoo division, where the main progress was expected, Mr. Hearle, specially deputed to demarcation work, fell dangerously ill, and, even if time had permitted, I had no officer to replace him.

The consequence was that the preliminary proposals in the Toungoo district remained *in statu quo*, augmented by proposals for enlarging the Thandoung reserve and creating small reserves on the Kannee and Thoukyaygât streams.

Reservation next to be considered.

7. The Forest Department should next give its attention to the reservation of the most valuable forests near the new railway line. Only the most valuable blocks should be reserved so as not to check the spread of cultivation, which I expect will be very rapid. The country on the upper courses of the Pyoo, Koon, and Yaynway streams will probably rather lose population than otherwise consequent on the construction of the railway line, and there is no immediate necessity for reserving those forests.

Nevertheless it would be a great boon if the whole reservation were finished, as it absorbs a large amount of the available working-power which might otherwise be spent on conservative and revenue measures.

The total cost of demarcation of State reserves amounted during the year to Rs. 6,104-4-5, of which Rs. 306-12-0 represent the travelling allowance of the civil officer.

No reserves in Arakan division.

8. No reserve exists in the Arakan division; but the Arakan teak plantation must be mentioned here. At Myouktoung, on the left bank of the Kaladan 90 miles above its mouth, eight patches of teak were planted up in 1873 and 1874 on toungya sites cleared by Shans, and were taken over in 1874 by the civil side in adjustment of Rs. 300 paid to the Shan saya as an advance recoverable. These eight scattered patches, generally called the "Myouktoung Teak Plantation," and enclosed within the fire-trace, aggregate acres 9-12-3. The spaces between them are stocked partly with plantation gardens and orchards and partly with kaing grass.

Without the fire-trace, and so bad as to be unworthy of notice, are other four patches aggregating acres 2-6-10.

2.—Protection of Reserves.

Area fire-traced slightly reduced to insure a better boundary.

9. The fire-traced area was this year reduced from 56,378 acres to 55,862 acres; 3,280 acres, forming the north-east triangular corner of the Mokeka Beelin reserve which was burned last year, were excluded in consultation with our Karen friends. The south boundary of this area is contiguous to the road between the Beelin and the Zamayee, constantly frequented by Shan traders and others who, either carelessly or wilfully, might set fire to the forest without any chance of detection. As an offset against this exclusion, arrangements were made with the Karens on the Minhla to protect the scattered toungyas in one block of 3,000 acres.

Area successfully protected.

10. Out of the area of 55,862 acres included in the fire-trace, 55,266 acres were successfully protected at a cost of Rs. 9,887, or Rs. 0-2-10 per acre.

The area burnt has to be reduced by 500 acres of bamboo forest in the state of seeding, which under my orders were surrounded by an interior fire-trace and burnt with a view to cultural operations. The area burnt against our will amounts consequently to 596 acres, a result which would be still more satisfactory if this did not include 295½ acres of regular plantation, 41 acres of toungya, and 11 acres of dibbling.

Detail list of fires.

11. The following is a list of the fires and the areas burned :—

Reserve.	Date.	Areas burned.	Area of plant included.	Age of plant burned.
		Acres.	Acres.	Year.
Bwet ...	13th March	...	.....	.....
	31st March	28	2½ toungya	rains 1881.
Minhla ...	5th April	60	7 do.	do. 1875.
	22nd April	20½	20½ do.	do. 1874.
	2nd May	...	.....	.....
Nyanleh ...	14th March	110	1 dibbling	rains 1881.
	25th March			
	8th April			
	13th April	70	8 teak trees; 10 dibbling	do. 1880.
Bawbin ...	20th March	12	3 acres	1878.
Magayee ...	31st March	25	25 regular plantation ...	rains 1876.
	11th April	270	270 ditto ...	do. 1877.
Pyoonchoung ...	April	¼	¼ ...	do. 1868.
	Total ...	596	847¼	

Cost of fire-protection.

12. The cost of fire-protection during the year, as said above, amounted to two annas and ten pies per acre. This is not a high charge; still it is largely enhanced by the expensive protection of outlying reserves surrounded by cultivation and kaing grass. The most expensive are the outlying plantations, Magayee, Prome, Myodwin, and the outlying toungyas on the Myoung at eight annas and eight pies per acre. Next in cost come the following reserves, bounded on one or more sides by plain cultivation and village lands:—Bwet, Nyanleh, Bawbin, Gwaydouksan, and Kangyee in the Tharrawaddy division, the Choungzouk reserve in the Prome division, and Pyoonchoung in Toungoo. The average cost per acre amounts to four annas and one pie, a charge which, considering the position of the reserve, must be considered moderate.

Cheapest of all, however, is the protection of the following reserves situated in the midst of forest areas and protected by Karens or other *bonâ fide* forest

folks:—The Minhla Mokeka-Beelin, and Koon Beelin reserves in the Tharrawaddy division, and the Yaynay reserves in the Toungoo division. These reserves aggregate 30,920 acres, and their protection has cost Rs. 1,889, or not quite one anna per acre.

By order of the Commissioner of Arakan a sum of Rs. 75 was handed over to the Deputy Commissioner of Akyab for the cutting of a fire-trace around the Myouktoung teak patches. Its length is 3,150 feet, and it encloses a total area of 22 acres, of which only acres 9-12-3 are stocked with teak. The cost of protection is therefore at the excessive rate of Rs. 3-6-6 per acre of the total area within the trace, or Rs. 7-10-10 per one acre of actual teak plantation protected thereby.

Causes of forest fires.

13. Altogether 13 separate fires took place within the fire-traced area; some of which however were so insignificant that they hardly require mention.

Five of these fires are put down to incendiarism. Two of these occurred in the Bwet reserve, and broke out some distance from the fire-trace as well as the road. It is supposed that they were lighted with a view to drive the game out of the reserve. The other three fires can only be attributed to incendiarism *mal prepense*. Two of these occurred in the Minhla reserve, but neither of them would spread as they were lighted too late in the season: in these cases suspicion rests on an individual, but no proof can be obtained.

The second fire at Magayee is, in my opinion as well as in that of the divisional officer, due to the same cause, as, in accordance with the evidence of three Madras watchmen who were at the time on three different positions on the fire-trace, the conflagration began a considerable distance away from the fire-trace. Suspicion rests on nobody in particular, and since the police and the Extra Assistant Commissioner (who however, it is surmised from their own records, neither visited the actual spot of conflagration, nor examined the only three eye-witnesses of its beginning) took the view that the fire was caused by carelessness on the part of the subordinate forest establishment in leaving burning logs on the fire-trace, any hope of discovery had to be given up.

However the burning of the fire-trace had been finished eight days previously, the trace had been patrolled since then, and the fire broke out a considerable distance away from the fire-trace.

The first fire at Magayee and one of the fires in Nyanleh no doubt were due to a log, the glowing of which was not observed, having been left unextinguished on the fire-trace, the wind rekindling the fire and carrying it into the reserve. In both cases, however, the fire occurred the day after the fire-trace had been burned. Another small fire at Nyanleh reserve and the fire at the Pyoonchoung were caused by the burning of kaing grass on the fire-trace, the watchers having lost control over it for a short time. These fires are but very rarely serious, as the precaution is taken not to burn on windy days.

Two of the fires at Nyanleh and the one in the Bawbin reserves alone were due to sparks from jungle-fires having been driven in from the outside; and in every instance the fire crossed in places where it had done so in previous years, and which are known as weak points in our protective lines and which were specially watched. I am now convinced that some alteration in the fire-traces is required in those places, though this will entail an additional outlay.

The fire which occurred in the Minhla reserve was traced to a survey camp. Incendiary fires of all descriptions are very common in Burma, and it occurs every year that felled and half dry toungyas are spitefully lighted: of course they do not burn properly, and yield consequently an inferior crop. During the last year villages were also fired in the Tharrawaddy district on three different occasions, and at Thaboung and Thehmeh, where the forest guard's house was, one of the houses was destroyed. This was done by shooting burning arrows into the roof.

Consequences of the fire.

14. Of the plantations, teak toungyas, and dibblings burned, those planted later than 1880 have been destroyed, and measures will be taken at once to re-stock these areas, but otherwise the damage done is of no great consequence. Especially at Magayee, where the grass had to a great extent been killed out, the trees sprouted with the first

showers of rain as if nothing had happened to them. Our observations would seem to prove that if an area has been protected for seven or eight consecutive years, the amount of good done thereby cannot be destroyed by a single conflagration, especially if the protection goes hand in hand with cultural operation, for as soon as kaing is killed out by tree-growth forest fires lose much of their destructive character.

The extermination of kaing grass kwins on or near the boundaries of the reserve by the planting of evergreen trees is being gradually proceeded with in the Toungoo division. It is a laborious task, but must be successful in time.

Area protected insufficient.

15. The area as yet protected, though considerable, is but a small portion of our State reserves and insignificant if compared with the whole forest area of British Burma, the greater portion of which is overrun by fires year after year. The enormous extent of damage done by these annually recurring fires is extremely difficult, I might say impossible, to gauge; they destroy the seedlings of valuable trees and make natural reproduction of a tree forest possible on a large scale only when bamboos have flowered and the ground is covered with a carpet of green young bamboos, which stifles the fire here and there, or when by some other accident the forest does not burn for a few successive years.

Consequences of ever-recurring fires.

16. The first consequences of these constantly recurring fires are bamboo forest with standard trees in the hills and kaing grass savannahs in the plains. The cover of dead leaves on the ground is annually consumed; humus, if it was in existence at some former period, has disappeared and cannot form under existing circumstances.

The rain-storing power of the forest is lost and the bare friable soil is washed down into the streams. Wherever a small flat stone, a piece of wood, or some other obstacle protects the ground, this forms after the rains the roof of a little mud pillar, and the soil round it having been washed away and carried down by the streams, is doubtlessly one of the main causes of their rapid silting up. This erosion does not take place in areas which have been successfully fire-protected for some years, and the streams in fire-protected forests become more and more perennial. A look at the Thoukyaygat forests east of Toungoo, where toungya of the shortest practicable rotation is practised over almost the entire area but where the country is strictly fire-protected, will show that erosion does not take place, that the streams are perennial, and that springs flow from near the top of nearly every hill.

The geological formation of the hills east of Toungoo is no doubt different, but none the less liable to erosion, as was clearly proved when the Thandoung cinchona plantation was for a few years kept free of weeds and all humus and a large quantity of the soil was promptly washed down into the valleys.

The forests on the Thandoung range, which had been protected for years, were burnt through during the last hot season (probably by Natives of India or Burmans connected with the trial sanitarium), and I measured charred humus to the depth of three to four inches.

Value of extended fire-protection.

17. The value of a fire-protection ultimately extended over a large portion of our State reserves would be very great, not only for the well-being and reproduction of the forest, but for the whole of the underlying country.

This state of things is, however, only attainable by a strict adherence to the provisions of the new Forest Act and rules as regards fires within and in the vicinity of forest reserves, and by trusting to a great extent to the legal control of the use of fire in forests. If people are hereafter permitted to allow the fires of their toungyas or their burning paddy-straw to spread where accident carries it as heretofore no such results can be obtained, for, even if the question of expenditure was got over, want of labour would for a long time be prohibitory to such vast extension of fire-protection by the method at present in use.

Next year's extension.

18. In the meantime I propose to extend fire-protection to the East Swa reserve and to a portion of the Kaboung reserve in the Toungoo district and part of the Lower Zamayee reserve in Hanthawaddy.

All places selected are easily fire-protected by the forest folks themselves and are capable of great improvement by means of toungyas and other conservative measures.

The cost of protection is not to be more than one anna per acre.

3.—Protection in other ways.

Breaches of forest rules.

19. Throughout the circle only nine cases of breaches of forest rules regarding State reserves were prosecuted, and in all of them convictions were obtained.

4.—Reproduction and Improvement of Forest growth within Reserves.

Teak-cultivation.

20. The area of regular teak plantations has not been increased, but 636 acres of teak toungyas have been stocked with 394,375 plants at a cost of Rs. 4,379. This gives an average of 636 plants per acre and an average cost of Rs. 7-0-4. Four hundred and fifty acres of flowering bamboos in the Bwet and Nyanleh reserves have also been burnt and planted up with teak seedlings in the same way as teak toungyas and with a good result. The cost of this cultivation amounts to Rs. 2,163, or Rs. 4-14-6 per acre. I have been longing for this opportunity of bamboo flowering on a large scale within a fire-traced reserve, especially as our operations when the thinwa flowered in the Mokeka Beelin had not been so successful as they might have been had we better understood the treatment of forests in bamboo; but both the divisional officer and myself were new to this kind of forest and had no records of previous observations. I trust that the detailed progress books introduced for each reserve will be of future benefit in matters of this sort.

For further operations an area of 500 acres of seeding bamboo has been burnt within the fire-traced reserve of Nyanleh after having been surrounded by an interior fire-trace.

The result of toungya-cultivation in Prome in the Choungzouk reserve was this year very much better than in any of the previous years, showing 698 plants per acre, against 242 in the last year.

In the Tharrawaddy division the average is 606 seedlings, which, though not so good a result as last year, is a sufficient stock of plants per acre. No less care had been expended on this year's cultivation, but floods in the Kangyee reserve and badly germinating seed in the Thonezeh and Koon Beelin reserves were the main causes of a lower average.

Weeding of teak-cultivation.

21. During the year 802 acres of former teak toungyas were weeded and cleared at a cost of Rs. 1,695. This work was cheapest done in Tharrawaddy, where the average per acre amounted to Rs. 2-0-10; but the improvement is most marked in the Prome division, which has now the second place on the list with Rs. 2-5-0 per acre, against Rs. 7 in the year before. In the Rangoon division the work costs Rs. 2-10-6 per acre.

Thinning.

22. Thinning has only been carried out in the Prome plantation and the plantations of 1866, 1867, and 1868 in the Pyoonchoung reserve. But within a year or two the question of extensive thinnings in most of the regular plantations and many toungyas will be an important question.

All the older plantations should be inspected next year with a view to ascertain the necessity of thinnings.

In Arakan the Myouktoung teak patches within the fire-trace were also thinned out towards the end of March, 1,730 poles being removed at a cost of Rs. 25 (which were disposed of on the 2nd April 1882 for Rs. 173).

Future extension of toungyas.

23. Since our teak-cultivations have now become universally successful, it is necessary that they should be extended to other parts of the country, especially as the forest villages in the North Tharrawaddy show a tendency to move nearer to the railway line. The areas I have selected for such extension are the Lower Zamayee reserve in the Rangoon division, and the Kaboung, East Swa, Yaneh, and Pyoonchoung reserves in the Toungoo division. In the former reserve we have to some extent succeeded

in making a beginning; but in all the Toungoo reserves no timely arrangements could be concluded, simply because the officer has too much work on hand. Next year every effort should be made to extend teak toungya-cultivation to the following limits :—

	Acres.
Prome division	150
Tharrawaddy division	500
Rangoon division—	
Magayee	100
Zamayee	150
Toungoo division—	
Kabounng	100
East Swa	100
Yaneh	25
Pyoonchoung	25
Total ...	1,150

which should be maintained as the minimum quite independently of other reproductive measures.

Cutting creepers and removing shade overhead.

24. Creeper-cutting and cutting away trees overhead of young teak has been carried on within all fire-traced reserves in a desultory sort of way, but we have had neither the time nor the man to spare to undertake this very important work systematically and on a large scale.

5.—Reproduction of Trees of other kinds.

Cutch.

25. In the Bawbin reserve in the Tharrawaddy division 5·75 acres of toungya were planted with cutch, showing an average of 1,220 plants per acre and average cost of Rs. 14-8-3; and in the Bwet reserve 40 acres of seeding bamboo forest were burnt and sown as well as 10 acres of an old kwin where the cutch was sown on mounds one foot high. All these sowings are fairly stocked. The cost amounted to Rs. 489, or nearly Rs. 10 per acre. With the large demand on cutch we are forced to artificial cultivation, for cutch, a *par excellence* light-loving tree, does not reproduce in a closed forest, and no benefit is obtained by keeping mature seed trees within our fire-traced reserves. Arrangements have been made to cultivate much larger areas of cutch during the present year.

Sterculia toungyas.

26. Six acres of toungya in the same reserve have also been planted with shaw with a view to make experiments of gaining the most valuable fibre of this tree in a systematic way; whether this can be done by a rotation of coppicing or otherwise must depend on future experiments, but I would recommend that its cultivation should be proceeded with on a small scale for some years to come and be extended or otherwise in accordance with the results of future experiments. The present cultivation shows 1,328 plants and costs Rs. 15-0-1 per acre. A toungya has also been cleared at the Pyoonchoung reserve in the Toungoo division for asimilar purpose to try the coppicing-power of shaw and letpan.

Evergreens on fire-traces.

27. In the Kangyee reserve Rs. 27 were expended in planting thitto and gangaw trees into the kaing grass; and in Pyoonchoung 2,123 saplings of toungbein, thitto, gangaw, jack, mango, and kanazo were planted out for the same purpose, that of suppressing and killing out the kaing grass. This cultivation costs Rs. 585-12-0.

6.—Exotics.

Mulberry.

28. A number of mulberry cuttings of Indian species were sent by the Revenue Secretary to several forest divisions for future introduction amongst silkworm-breeders. They were put out in Kadinngazin and the Tharrawaddy forest garden. Many of them have struck and are growing, but it will take some years till they can produce cuttings or seed for distribution.

29. Of the mahogany trees several have died during the year in the Kangyee reserve, where only nine were alive at the end of the rains, and of these six appeared in a dying state. Their state of health was evidently due to a fault in the drainage, and they were taken to the forest garden at Tharrawaddy, where they immediately recovered. One tree in the Pyoonchoung reserve was killed by an elephant.

Mahogany.

There are now 90 trees alive in the Pegu circle, and a number of healthy seedlings raised from acclimatised seed which Mr. Nisbet appropriated at Akyab.

At Akyab 11 mahogany trees exist, survivors of a few seedlings sent to the Commissioner of Arakan from the Calcutta gardens during 1838 to 1842. They yielded three fruits during the present season (March 1882), of which two were obtained, but the third burst a day or two before the date fixed for the plucking, and, owing to the very high winds, the large winged seeds were carried beyond reach of collection.

The trees vary from 40 to 65 feet in height and five feet three inches to seven feet in girth at four feet above ground; the boles, however, are only five to six feet six inches in length, owing to their isolated positions as avenue trees.

30. Some of the *Pithecolobium* raised from seed in 1878, and which were planted near the Thonezeh bazaar, have flowered.

Pithecolobium Saman.

31. Altogether 60 *Ficus elastica* trees are now growing, the largest of which is 25 feet high. Thirty-eight of them are growing at Magayee, 12 at the Tharrawaddy forest garden, and 10 up at Thandoung.

Ficus elastica.

32. Thirty-nine *Chevanessia esculenta* plants are all that represent the experiment with this creeper. They are of much slower growth than was anticipated; still their property as a caoutchouc-yielding plant being undoubted they should not be lost sight of.

Chevanessia esculenta.

33. Of the Ceara rubber plants only 23 remain alive, 11 having been destroyed by elephants. They are from one to 11 feet high and look healthy.

Ceara rubber.

34. Thirteen old plants of vanilla and 48 cuttings of vanilla are growing at Magayee and two at the Tharrawaddy forest garden. In Magayee a vanillary has been constructed at a cost of Rs. 212-0-6, which will facilitate the operation of fertilization.

Vanilla.

A cutting struck only two years ago flowered during the year and set three fruits.

35. A plantation of 1¼ acres of *Broussonetia papyrifera* has been made at the forest garden in Tharrawaddy. The plants were grown chiefly from seed received from Moulmein; a few from Japanese seed obtained from Erfurt. Of the latter however only 90 germinated, and most of the young plants died. Both, I believe, are the same plant, though the colour of the leaves is slightly different. They grow extremely rapidly and, if they coppice as well, would form a promising plantation for paper-stock. They are not, as has been said, the same plant as the malaingnweh, from which the parabikes are usually made.

Broussonetia papyrifera.

A large number of *Broussonetia* seedlings has also been raised at Thandoung.

36. Cinchona, tea, and coffee have proved, unaided by watering, a complete failure in the Pyoonchoung reserve. Cinchona and tea have all died off, and 12 coffee plants have only been saved by constant watering during the hot weather. Under this treatment they do well.

Cinchona, tea, and coffee at Pyoonchoung.

37. At the Thandoung plantation some 54,000 plants are established in the permanent plantation according to the latest enumeration, and the cost of the plantation up to date amounts to Rs. 50,203. During the year Rs. 3,140 were spent. Nine hundred and fifty-seven cinchona plants were destroyed to make room for the barracks of the trial sanitarium, and since this has proved so far a success it is likely that a large area of the plantation will have to be given up.

Cinchona at Thandoung.

I am sorry to see the destruction of the best portion of the plantation, but, in my opinion, it was of greater importance not to start a trial sanitarium on newly cleared forest soil, the Thandoung plantation being, thanks to the treatment it once received, washed fairly clear of humus and other vegetable deposits.

The bark of the trees removed to make place for the barracks was stripped, dried, and sent to Rangoon.

An application for 5,000 seedlings has been made by Mr. Petley, but the introduction of its cultivation amongst the Christian Karens of the Thoukyaygat is *in statu quo ante*, though I believe that cinchona, as well as coffee and tea, would nowhere grow better than on the outskirts of the irrigated areca-palm plantation, perhaps even in the shade of those trees, for at Thandoung the best trees are near watercourses and on the edge of the forest.

Some of the trees in the oldest *Succirubra* plantation show signs of dying off. I am inclined to believe it is due to overcrowding and starvation. A visit by an expert in cinchona-planting would be most desirable.

Coffee and tea at Thandoung.

38. Coffee and tea seem to grow very well at Thandoung. A number of plants were destroyed by the Commissariat cattle, but some 3,400 coffee and 2,500 tea plants are now on the ground. The whole area bearing these plants will however probably be included in the cantonment boundaries, though perhaps that is no reason they should be destroyed anywhere but on the place actually occupied by barracks.

Forest garden.

39. The forest garden at Tharrawaddy has now been fairly started. The soil, though of a fair quality, has for the last 40 years been subjected to wet cultivation, and the consequence is that the ground is well puddled and the sub-soil almost impervious. This of course necessitates a considerable amount of trenching and draining and turning the soil and of exposing it to the influence of the air. All this raises, at first, the expenses of experiments.

During the year the outlay on the garden amounted to Rs. 2,394, of which Rs. 553 went for roads, Rs. 94 for a seed-shed, and Rs. 1,747 for experimental plantations and maintenance.

Besides the experimental plantations already noted, numerous plants and trees common to the district have been planted, and many plants have been introduced from other parts of Burma or from abroad. In the detailed divisional record appended to this report a list of such plants can be found.

7.—Other improvements within Reserves.

Removal of obstructions.

40. Within the Thonezeh reserve a waterfall formed by solid sandstone rocks some 50 feet in height, into which the water had eaten a narrow and crooked channel, obstructed entirely the passage of timber from the Upper Kodoogweh. A blasting party had been sent up and timber contractors collected some 500 logs behind the obstruction, which they thought would be made passable. However, after a season's work, but little impression was made on the rock. I went up with Mr. Vercoe, of Nobel's Explosives Company, and the divisional officer, and within six days, and by the expenditure of Rs. 120 on labour, 138lbs. of dynamite and 50lbs. of gelatine, a perfectly free passage was blasted by the removal of some 300 tons of rock.

I also removed on my way to Toungoo the obstruction in the Thayet stream in the Bawbin reserve and cleared the Bawlin Zamayee pass of boulders and fallen trees by the expenditure of Rs. 64 and 35lbs. of dynamite. This operation took three days.

CHAPTER II.

Protection of Unreserved Forests.

Breaches of forest rules under Notifications Nos. 33 and 34, dated 8th March 1870.

41. The only protection of unreserved forests consists in the reservation of certain species, and no alteration has been made in the law regarding this, so that therefore, besides instituting prosecutions under this law, nothing has been done to protect forests not included in reserves.

The number of cases brought with a view to protect unreserved forests was very small indeed, amounting only to 31, in which 51 persons were implicated. In 24 cases, concerning 31 persons, convictions were obtained. In some instances the punishments are very lenient; but it is a custom in almost every country to let the poor timber thief off easy, and no matter of special complaint, especially as the breaches against the rules protecting some species of trees only are extremely rare if compared with the population they concern. It is easier for a Burman to fell and extract a tree of one of the unreserved kinds, many of which answer his purposes quite as well, than to run the risk of prosecution and conviction. In future, when the new Act comes into force and people have to pay for all timber which they sell or barter, this will be different.

Only one case occurred of a more serious nature, and that really falls under the general criminal law. Moung Tha Ee, a petition-writer in Poungdeh, forged a cutch-boiling permit. The intending cutch-boiler went with the permit to the forest officer to find out the day it expired, and thus the forgery was found out immediately after it had been committed. Moung Tha Ee was sentenced to five years' rigorous imprisonment.

CHAPTER III.

WORKING AND YIELD.

1.—By direct Government agency.

Extraction of teak.

42. During the year 18,465 teak logs were extracted by Government contractors. Of these, 874 logs were sold locally for Rs. 21,493. An average of this is not drawn on account of the inequality of timber: 17,057 logs were despatched from the several divisions to the Rangoon Central Depôt; 136 were in hand at Toungoo and 398 in Tharrawaddy. Besides this 50 logs of inferior teak last year extracted from Mahathaman and a few old scantlings were sold for Rs. 737.

Seven logs were used locally for the construction of a derrick, and 45 logs were made over to a contractor as his share in a half-profit principle contract.

Sixteen thousand six hundred and twenty logs were received at the depôt; and at the close of the year therefore 437 are to be accounted for as in transit. Of these, a raft of 100 is stranded on a sandbank below Prome and 125 are between Toungoo and Rangoon. Ninety-five logs from Prome and 117 from Tharrawaddy have still to arrive at the Central Depôt.

Cost of extraction of teak.

43. Payments were made during the year for the extraction of 13,618 teak logs at an average of Rs. 10-5-6 per log.

The average for the Toungoo division, Rs. 16-6-2 per log, is somewhat high; but the timber, the remnant of old girdlings, is far apart and difficult of extraction, and several contracts had to be given on the half-profit principle.

In the Tharrawaddy division the average per log is three pies under the Rs. 9. Certainly the timber was very poor, but even then the average is extremely low. During the year a petition was received by the Chief Commissioner regarding the alleged insufficiency of remuneration to these contractors, and I have been asked to comment on this in the annual report.

The average rates paid per log during the past 10 years are—

	Rs.	A.	P.
1872-73	7	2	0
1873-74 *		.....	
1874-75	16	0	0
1875-76	13	0	0
1876-77	10	12	0
1877-78	9	6	0
1878-79	9	12	0
1879 80	9	5	0
1880 81	9	8	0
1881-82	9	0	0

* Cannot be given as timber delivered at Rangoon and at railway bridges has been lumped in the accounts.

The schedule of rates was altered in the beginning of 1873-74, as was explained in my predecessor's letter.

Under the new schedule, by which rates were calculated by far too much on the length without giving due weight to the increase in girth or the symmetry in shape, the central depôt naturally was filled with timber, for which the contractors realized the highest rates as compared with their work,—timber which was of less commercial value than much of what was left in the forest.

I consequently reframed the schedule in 1877, giving greater preponderance to girth and symmetry without lowering the payment per ton of timber extracted. The measure was successful: the highest prices were paid for timber of the highest commercial value, and at no previous period has the forest been so clear of old dead timber of all kinds as at present. The decline in the rates since 1878-79 is due to the general inferiority of timber in the forests, no new timber having been girdled. After careful consultation and consideration I have now sanctioned that straight timber below four feet six inches in girth and above 30 feet be measured at 15 feet from the butt dragging hole instead of the middle. This is but fair, and Government can well afford it; but it opens the door to abuse, contractors or their agents influencing the selection of trees to be girdled, which at present they have no interest to do.

I have also raised the rates in classes V and VI as not in proportion with the rest of the rates, and as I want to encourage the bringing out of those classes of which there is still some timber in the Koon Beelin, Bwet, Thaboung, and several other forests.

The average rate for the Prome division was Rs. 13-3-3, as Rs. 3-12-0 have to be paid for floating from Prome to Rangoon. Otherwise the same rates are in force.

The average for Rangoon is Rs. 10-7-5 for timber brought out under contract rates, but as the scattered timber left in some of the upper valleys had to be brought down on the half-profit principle, which gave Rs. 14-9-9 a log for 676 logs, the total average amounts to Rs. 12-0-9.

Timber of other kinds.

44. Of timber other than teak, 2,580 logs were extracted for the general market and 16,345 logs for the Sittang Railway. The former comprised thitka, pyinma, pyingado, kyoonbo, kokay, dawnee, toukkyan, &c. The latter were all pyingado.

Of the former 2,240 have been paid for, costing Rs. 19,470, or Rs. 8-11-0 per log. The latter cost Rs. 90,372-2-0, or Rs. 5-10-1 per log.

Of the timber for the public market, 66 were sold locally for Rs. 641-14-0, or Rs. 16-4-8 per log. One thousand three hundred and twenty-three logs were received at Rangoon Central Depôt, 1,080 logs at the Bassein Depôt, and 111 logs were in stock in Toungoo.

Of those in the Rangoon Depôt 684 logs were sold, yielding Rs. 17,837, or Rs. 26-1-2 per log; and 110 were disposed of at Bassein for Rs. 1,464, or Rs. 13-4-11 per log.

Of the logs extracted for the railway, 16,042 were made over at an average of Rs. 8-1-0 per log, 26 sent to Rangoon Depôt, and 277 logs at the Palone railway station.

Difficulty of disposal of timber in Bassein.

45. The disposal of a large and still steadily increasing balance of timber in the Bassein Depôt is a source of some anxiety. There will be, all in all, some 2,000 logs, which were ordered by the Jail Department, many of which, intended only for ventilating-boards, are of inferior timber and will not bear a long exposure. The jail saw-mill having been countermanded, the great difficulty is now to dispose of the timber, and to do this effectually I am afraid I will have to undertake considerable sawing operations with labour taken over from Rangoon.

Sleepers.

46. In addition to this 116,509 sleepers of other kinds were extracted, including 22,468 brought over from Tenasserim. The cost of these sleepers, the larger portion of which is pyingado, amounts to Rs. 1,60,025, whereas Rs. 1,80,388 were received from the railway for 107,509 sleepers, 9,000 still remaining in the hands of the Forest Department.

I calculate that a ton of timber will give an outturn of 20 sleepers, and at Rs. 5 a ton, therefore, the value of the sleepers delivered would be—

	Rs.
Charges for 107,509	1,46,525
Value of wood	26,378
Total ...	1,72,903

leaving the small balance of Rs. 7,485 as compensation for supervision.

Neaped timber and expected outturn.

47. The amount of neaped timber is not very large, and I believe it does not amount throughout the circle to 3,500 logs. However, the activity in the extraction of timber has been considerable, and, if the floating season turns out favourable, we may reckon on an outturn of 20,000 logs of teak.

Outstandings.

48. The outstandings by contractors amount to Rs. 70,646. Of this, however, Rs. 18,154 in Agency and Shwaygyin divisions are covered by a mortgage on the Shwaygyin Saw-mill belonging to Jemaloodeen and Kapplodeen.

The large outstanding in the Tharrawaddy division is amply covered by elephants given as security. It was necessary to make these advances, as 17 contractors' elephants which had to be replaced died during the year. In the Western division contractors had to buy elephants to begin the large contracts which were taken in hand on account of the proposed jail saw-mill, and advances had to be made to them. These contractors, who promised themselves a steady work for the Bassein market which was being started by the erection of a jail saw-mill, have been disappointed by the countermanding of the orders for the building of the mill.

2.—Drift Timber.

Timber salved and collected; teak.

49. During the year under report 974 logs of teak were salved on the Irrawaddy and its tributaries, 7,116 on the Sittang, 438 on the Pegu river, and 226 logs on the seashore. Of these, 6,317 logs were made over to claimants on payment of salvage, 1,227 were sold locally and from depôts, seven were used locally, 222 were sent to Rangoon, and 921 are still in hand.

Other woods.

50. One thousand and forty-seven logs of wood of other kinds were also salved during the year; and of these 339 logs were made over to claimants, 301 logs were sold, 30 went adrift, four were used, and 373 logs are on hand at the end of the year. Seven hundred and eighty-four logs of teak and 71 logs of other kinds, being the balance of last year's drift timber operations, have been disposed of, 850 logs by award to claimants, and five logs sold. The cost of all drift timber operations during the year amounted to Rs. 22,355 and the income derived to Rs. 61,496.

3.—Central Sale Depôt.

Ahlone Depôt, Kemmendine.

51. The balance of timber in hand at the Alone Depôt amounted at the beginning of the year to 472 I class and 6,472 II class teak logs, besides 79 teak sleepers, or a total of 6,273 tons.

Receipts of timber at depôt.

52. During the year 17,190 logs were received, including drift timber, which were classified as 2,065 I class and 15,125 II class logs, and measured to contain 16,540 tons. Two thousand and sixty-eight logs of timber of other kinds, thitka, pyingado, pyinma, dawnee, &c., as well as 22,468 pyingado sleepers, were also brought to depôt, and measured to contain 2,964 tons.

Disposals of timber at depôt.

53. The disposals during the year amounted to 2,120 teak logs of the I class and 13,822 of the II class, amounting altogether to 15,780 tons.

Average rates.

54. The average rates realized per ton were—

	Rs.	A.	P.
Mast-pieces	47	6	4
Yard-pieces	61	8	2
Doogyees I	70	0	2
Doogyees II	45	9	2
Loozas	50	0	0
Yathits	49	0	0

Of timber of other kinds 722 logs and 22,468 sleepers were disposed of, realizing Rs. 22-14-8 per ton for the round timber.

Balance in hand.

55. The balance in the depôt at the end of the year amounts to 417 I class teak logs, 7,775 II class teak logs, and 833 logs of timber of other kinds, standing on the books as 7,033 tons of teak and 908 of other timber.

Bassein Depôt.

56. The Bassein Depôt contained in the beginning of the year a balance of 28 logs of wood other than teak. During the year 94 sea-drift logs of teak and 1,080 of other kinds were brought to depôt, 94 logs of teak and 110 logs of other kinds were disposed of during the year, leaving a balance of 998 logs at the end of the year, of which a considerable proportion is very perishable.

4.—Girdling.

Girdling; special report submitted.

57. During the year 16,621 teak trees and 2,457 trees of other kinds have been girdled at a cost of Rs. 4,435-8-1. A special annual report on the season's girdling, with statements and maps showing the position of the trees girdled, has already been submitted.

5.—Lines of Export.

Improvement of watercourses.

58. In addition to the blasting operations already noted in Chapter I, several improvements have been made as regards floating channels.

The Public Works Department have undertaken the rectification of the Toungnyo stream, as well as of the Too and Myolay in the Tharrawaddy division, both works of great importance for the Forest Department, the Railway, and the surrounding country at large.

Since railway lines, roads, and canals are constructed across many of the main drainage lines of the country, the regulation of the lower courses of our floating streams becomes a matter of importance, and of such difficulty that the work ought to be taken in hand by specialists, and this has, I am thankful, been recognized by the Public Works Department undertaking the more important works.

The Forest Department have cleared the beds of several streams by removing obstructions and silt.

Fisheries and kanyin timber.

59. One of the chief dangers, next to fisheries, lies in the extraction of kanyin logs, which, if not properly seasoned, sink and become imbedded in silt. The Minhla stream was entirely silted up this year through sunken kanyin logs, and was cleared only with the greatest difficulty, the heavy work in mud and silt causing moreover the death of three elephants belonging to contractors.

In future no kanyin logs will be permitted to be exported before payment. This will make the logs more valuable to the exporter, and probably greater care will be taken of them. The new forest rules moreover provide for the removal of an obstruction at the cost of the man who causes it, which will give the Forest Department sufficient power to control the extraction of kanyin and in trees.

It has at last been recognized that a sufficiently regulated drainage of a country and fisheries by means of crude dams cannot be co-existing; and, especially in the Shwaygyin division, much has already been done to alter the former state of things, particularly as regards streams crossing the railway.

6.—Timber removed by Consumers and Purchasers.

Local sales.

60. During the year a small number of teak trees was sold in the forest for the convenience of the Public Works Department and for the construction of police barracks. Of these, 26 were I class girdled timber, realizing Rs. 3,094, 100 tons were II class and were sold at Rs. 35 per ton, of which however 76 tons have only been paid for. A few small refuse teak were also sold, both in Prome and Shwaygyin divisions.

Worthy of note is the sale of 1,457 pairs of teak cart-wheels for Rs. 2,914. The wheels are manufactured from refuse teak which for years lay unexported and unused. The cart-wheels are made on the European principle.

Teak in paddy-fields.

61. Four thousand one hundred and ninety teak trees were sold standing in paddy-fields, realizing Rs. 11,287. A large number of these trees is still in existence in the Tharrawaddy division, in Prome, and between the Irrawaddy and the slopes of the Arakan Yoma. I made a statement some time ago that all this timber could be sold within five years after the introduction of the new Forest Act. I believe now that this can be done if speculators are let into the market on a large scale; but I doubt whether it can be done by selling the trees almost entirely to local demand. I think it advisable to adhere to this plan, for it is possible that by selling all teak in paddy-fields on a certain area to one man the people might get harrassed, which they are not at present.

Cutch trees; reserves.

62. Five thousand cutch trees were sold to the Bombay-Burma Trading Corporation in the Tindaw, Sasoowa, and East Yoma reserves at Rs. 3 per tree. Of these however only 249 have been paid for and extracted up to 31st March.

Cutch trees do not reproduce in a closed forest, and therefore there is no good reason for leaving mature and overmature trees of this species in reserves which cannot be regarded as a simple store-house of mature timber, and I have made arrangements for the sale of a considerable number for the running year. As stated in a previous chapter, arrangements are being made to re-stock parts of the reserve with cutch by artificial means.

Trade and free permits.

63. During the year trade permits were issued for 29,321 trees, and a felling fee of Rs. 9,883 was realized. The tonnage fees amounted to Rs. 56,789, charged for 18,477 tons brought into the market. Kanyin, pyingado, pyinma, in, and thingan are the trees on which the revenue has been mainly obtained.

The following were the number of free permits granted during the year:—

District.	Number of trees.
Prome	26,905 on 818 permits.
Tharrawaddy	24,284 on 872 do.
Thayetchoung	16,178 on 578 do.
Toungoo...	19,425
Rangoon...	4,577
Shwaygyin	1,865
Henzada and Bassein	5,300
Total ...	98,034

This shows a considerable increase, and it is worth noticing that each permit in Prome, Tharrawaddy, and Thayetmyo is on an average for 29 trees. However, the question of free permits is disposed of by the new forest rules.

7.—Minor Forest Produce.

Cutch and other minor forest produce.

64. During the year permits were issued for 2,611 cutch cauldrons, realizing Rs. 48,486, mostly at Rs. 20 per cauldron, whereas last year 7,275 cauldrons were at work. This is a certain sign that we are at present near the end of our cutch-supply outside reserves, which is confirmed by the fact that people are willing to buy trees within the reserves at Rs. 3-6-0 per tree, which is equal to a fee of about Rs. 200 per cauldron.

For bamboos extracted from reserves Rs. 3,857 were realized and Rs. 918 for grazing in reserves and for the extraction of thatch, shaw, bark, &c.

For charcoal and other minor forest produce Rs. 3,840 were obtained. For charcoal-burning, dead trees and branches lying on the ground are almost invariably used, but I am convinced that charcoal-burners kill hard-wood trees for a future supply. The quantity of charcoal manufactured by one individual during the season amounts to 300 chins, necessitating the coaling of about 18 trees. A chin weighs about 22lbs. The price of charcoal in town varies very much; in the forest it is about eight annas per chin for common charcoal and 12 annas to Rs. 1 for blacksmith's coal made of pyingado, thitsee, or anan.

One kanyin-oil extractor taps about 30 to 40 trees and obtains 40 to 50 viss of oil sufficient for a manufacture of from 2,000 to 3,000 torches, which sell locally at about Rs. 1-8-0 per hundred. The working season is January, February, and March.

The total revenue for cutch and other minor forest produce amounts to Rs. 51,383.

8.—*Summary of yield of Government Forests.*

Summary of yield.

65. During the year under review the yield of the forests in the Pegu circle is as follows:—

Timber.

	Teak.			Reserved trees.			Remarks.
	Logs.	Scantlings.	Tons.	Logs.	Scantlings.	Tons.	
By Government agency ...	18,465	528	17,642	18,925	107,509	15,651	
By purchasers	4,369	...	1,614	520	...	246	
Under trade permits ...	12	...	8	33,149	...	17,237	
Free permits	...	...	...	98,860	...	39,540	
Free	8	...	9	...	...	...	
Total ...	22,854	528	19,273	151,454	107,509	72,674	

I estimate 176,000 cutch trees were utilized for cutch-boiling, yielding about 3,000,000 viss of cutch.

9.—*Financial Results.*

66. The receipts and expenditure of the year, as exhibited in Form No. 53, were as follows:—

	Rs.
Receipts	13,29,842
Expenditure	7,59,542
Showing a surplus of ...	5,70,300

During the previous year in this circle—

	Rs.
The receipts amounted to	8,66,552
The expenditure to	4,41,977
Leaving a balance of ...	4,24,575

The figures thus show—

	Rs.
Increase in gross revenue of	4,63,290
Increase in net revenue of	1,45,725

Revenue.

67. The revenue was derived from the following main sources:—

	Rs.
Timber and other produce removed from the forests by Government agency, exclusive of railway sleepers	9,82,489
Railway sleepers	1,80,888

Timber and other produce removed from the forests by consumers or purchasers—

	Rs.		
Timber	94,504		
Firewood and charcoal	1,552		
Bamboos	8,857		
Grazing and fodder grass ...	182		
Other minor produce	51,383		
			1,51,428
Confiscated drift and waif woods	...	...	61,496
Duty on foreign timber and other forest produce	...	...	.....
Miscellaneous	...	...	4,041
	Total	...	13,29,842

Expenditure.

68. The classified expenditure is exhibited below :—

	Rs. A. P.	Rs. A. P.
(A) Conservancy and works—		
Removal of timber and other produce by Government agency, exclusive of railway sleepers	3,14,974 8 11	
Railway sleepers	1,56,092 7 7	
		4,71,066 11 6
Consumers or purchasers		7,700 8 8
Management of confiscated drift and waif woods ...		22,855 2 5
Purchase and keep of cattle and stores		42,728 9 10
Communication and buildings		6,356 5 11
Demarcation, improvement, and extension of forests.		
Demarcation		6,104 4 5
Compensation for land and rights		2,272 8 0
Survey and working plans		8,213 1 4
Plantations		14,563 9 11
Protection from fire		9,226 2 6
Other works		1,126 5 4
Miscellaneous		8,640 4 7
Total ...		6,00,353 10 5
(B) Establishments—		
Salaries		1,25,292 8 8
Travelling allowances		23,375 12 5
Contingencies		10,520 13 4
Total ...		1,59,188 13 0
GRAND TOTAL ...		7,59,542 7 5

Comparison of revenue.

69. Revenue I(*a*) exhibits an increase of Rs. 4,66,903 as compared with 1880-81. The number of logs, teak, sold in 1881-82, as compared with previous year, is somewhat less. The large increase of receipts under this head is due to sale of 108,037 pyingado sleepers and 16,042 sleeper-pieces of other kinds to the Rangoon and Sittang Valley State Railway and to the very good prices realized throughout the year for teak timber, especially of the II class.

Revenue II(*a*) shows an increase of Rs. 15,501, accounted for in the Rangoon, Tharrawaddy, and Prome divisions. There is an increase of Rs. 8,062 in Prome, Rs. 3,733 in Tharrawaddy, and Rs. 7,754 in Rangoon. In the other divisions there is a falling-off. Under II(*b*) there is a slight increase of Rs. 55, which calls for no remarks; while under (*c*) there is an increase of Rs. 1,966 and of Rs. 53 under (*d*), thus showing a regular increase under both these heads, due to sales from reserves. Under (*e*) is exhibited a considerable decrease, namely, Rs. 36,328, although the fee for a cauldron has been raised from Rs. 10 and Rs. 12 to Rs. 20 in the Tharrawaddy and Prome divisions. The decrease naturally occurs in the Prome and Tharrawaddy divisions, being Rs. 23,264 in the former and Rs. 12,135 in the latter. There is also a slight falling-off in the Rangoon, Western, and Toungoo divisions.

Revenue III shows an increase of Rs. 19,491 as compared with previous year, while the number of logs salved was 9,494, or an increase of 1,995 logs in previous year. The increase is to be observed in the Agency, Western, and Shwaygyin divisions to the largest extent. Toungoo and Tharrawaddy also exhibit increased receipts under this head. Prome division had no drift timber operations so to say.

Under V, Miscellaneous, there is a falling-off of Rs. 706 under (*a*) and an increase of Rs. 119 under (*b*). These call for no remark. Under (*c*) there is a large falling-off of Rs. 3,765, almost wholly under Agency, where the work of dragging was so heavy that the services of the departmental elephants could not be utilized for the launching of sale timber for purchasers as in previous years, while private proprietors were willing to undertake the work at much lower rates.

10.—Expenditure.

Comparison of expenditure.

70. Expenditure I(*a*) shows an increase of Rs. 2,84,800, accounted for by the cost of sleepers and sleeper-pieces supplied to the Rangoon and Sittang Valley State Railway. AI(*b*) to (*e*) call for no remark. AII shows a decrease of Rs. 370. While the establishment of the revenue stations remained unaltered, the charges have been somewhat lower. AIII shows an increase of Rs. 6,929, while there has been a corresponding increase under receipts for drift timber, as shown under Revenue III, of Rs. 19,491. The operations in the Shwaygyin, Toungoo, Western, and Agency divisions were on a larger scale and entailed as a matter of course increased expenditure. AVI(*a*) exhibits an increase of Rs. 14,850. In 1880-81 no animals were purchased and two were received from the Government khedda at Dacca. In this year 12 animals had to be purchased to replace casualties and place the baggage animals proportionately at each division. The budget provision was Rs. 15,000, so that there is a slight saving. AVI(*b*) shows a decrease of Rs. 1,856 and calls for no remark.

Under AVI(*c*) there is an increase of Rs. 11,740 under this head, due to the cost of a steam-launch built for this department at the Government dockyard, Kidderpore. Only part cost of the launch is exhibited. The fittings, &c., will entail further expenditure, which will appear in 1882-83.

Under AVII(*a*) there is a decrease of Rs. 1,106; while under (*b*) there is a decrease of Rs. 611. Under (*c*) there is a small increase of Rs. 431 owing to the cutting of two waterways at the Kemmendine depôt, in the Tharrawaddy division, and in blasting operations in the Kodoogweh, Rangoon division, and the clearing of streams of silt and rubbish to facilitate floating.

AVIII(*a*) shows a decrease of Rs. 10,722 owing to limited operations and non-appointment of civil officers. (*b*) shows an increase of Rs. 522 owing to compensation afforded to villagers in the Shwaygyin and Prome divisions, and in the Western division to squatters for extension of timber depôt at Bassein. Under (*c*) there is a large increase of Rs. 7,995, being cost of survey operations (debitable to this department) by the Cadastral Survey party working in the Tharrawaddy division. Under (*d*) there is a slight decrease of Rs. 468; and under (*e*) a slight increase of Rs. 119. Under (*f*) there is a decrease of Rs. 1,714 owing to limited cultural operations in the Tharrawaddy and Toungoo divisions.

AIX(*a*) shows a decrease of Rs. 869; and under (*b*) a decrease of Rs. 20; while under (*c*) there is an increase of Rs. 6,783 owing to sums which have been debited to this head under sanction of Government as profit and loss.

Under BI, Establishments, there is an increase of Rs. 1,490 under (*a*) owing to salary of Conservator being raised by Rs. 200 per mensem from July 1881. Under (*b*) there is a decrease of Rs. 9,122 owing to absence of Deputy Conservator during entire year and difference of salary of Deputy and Assistant Conservators. Under (*c*) and (*d*) there is an increase of Rs. 7,675 and Rs. 138 respectively. The large increase under (*c*) is due to introduction of new scale of establishment from 1st September 1881.

Under BII, Travelling allowances, there is on the whole a decrease of Rs. 2,006, chiefly under superior officers, whose bills for the latter months of the year were not received and passed in sufficient time to admit of their being drawn and charged in 1881-82.

Under BIII, Contingencies (*a—f*), there is an increase on the whole of Rs. 2,960, of which Rs. 2,077 belong to (*c*) rents, rates, and taxes owing to the office now being located apart from the public buildings; while under (*f*) there is an increase of Rs. 886, chiefly in the Arakan, Rangoon, and Tharrawaddy divisions.

General.

71. In the Shwaygyin division a depôt-house was built at Myitkyo at a cost of Rs. 1,000, and a rest-house at Patheechoung in the Toungoo division at a cost of Rs. 641. New rest-houses have been nearly completed at Thehmeh, near Bwet reserve in the Tharrawaddy division, and Banbwaybin, near the Swa reserve in Toungoo.

Buildings.

All forest-houses, depot-houses, and rest-houses have been kept in repair at a cost of Rs. 2,695.

A derrick for the loading of timber on the railway trucks has been erected at Okepo station at a cost of Rs. 569-14-0.

The chain mooring at Toungoo has proved a perfect success. No logs have been lost, and the same arrangement will be introduced at the Myitkyo Depôt during the present year.

72. At the beginning of the year 34 elephants were attached to the several divisions of the Pegu circle. Twelve were bought during the year and 10 died, leaving a balance of 36 animals,—10 males, 25 females, and one calf.

Elephants.

The average monthly cost per animal amounts to Rs. 692 for depôt elephants and Rs. 312-3-4 for elephants in the district.

73. During the year the following teak timber was imported :—

Imports and exports of timber.

	Logs and squares.	Scantlings and planks.
By the Irrawaddy ... ...logs.	5,737	...
By the Mindone and Boolay ... ...sqrs.	1,225	365
By the Sittang	22,386	...
Total ...	29,348	365

Thus this year's imports will fairly amount to 25,000 tons.

The exports, in accordance with the custom-house statement, which will be found in the appendix, amounted to 22,445 tons.

74. The market in I class timber has slightly but steadily increased through out the year; that in II class timber has ruled higher than ever before.

Rangoon timber market.

75. Teak toungya plantations and a large portion of the most important forests in all divisions, except the Western and Arakan, were inspected by me during the year and I have all reason to be satisfied with the workmanlike way in which forest operations of every description have almost without exception been carried out. But, even amongst a good staff of officers, Mr. Oliver deserves specially to be mentioned for the thoroughness of his work. The Tharrawaddy division has been under two excellent officers, Mr. Popert and Mr. Oliver, in succession, and is no doubt the place to which young officers arriving from home should first be sent, as has been proved by a number of good officers who got their first introductions in the management of a division at Tharrawaddy.

Inspection.

The health of the superior establishment has been moderately good, but nearly all officers suffered from short attacks of jungle-fever.

The subordinate establishment has very much improved by last year's weeding out, the regulation of promotion in their ranks has been greatly appreciated, and a good deal of hard work has been done by most of them.

The health of the subordinate establishment has been very bad. Most of our rangers have been down with severe fever or rheumatism, often due to exposure during the planting season.

This is to be regretted, but without a considerable amount of exposure of everybody concerned in the management forest operations cannot be successful.

I have been satisfied with the office establishments, and Mr. Allmark has done good work in charge of the agency and depôt.

B. RIBBENTROP,

Conservator of Forests, Pegu Circle.

APPENDIX.

Detailed record of Work done in the different Divisions.

A.—Reserved Forests.

PROME DIVISION.

Increase in reserves.

DURING the year under review the area of reserves in the Prome division was increased by 345 square miles. By notifications Nos. 39 and 40, dated the 20th June 1881, the Saingdo and Thabala reserves, measuring one and nine square miles respectively, were sanctioned, and by notifications Nos. 83 and 84 the Ngawet and Mindone Yoma reserves containing 5 and 260 square miles.

Final sanction was also obtained in notification 78, dated the 15th September 1881, to the reservation of the North, Middle, and South Nawin reserves, aggregating 109 square miles of unburdened reserves and a Karen area of 43 square miles. The area now sanctioned contains 30 square miles of detached reserves of previous sanction, which however had never been permanently demarcated towards the proposed and now sanctioned reserve. The names of these reserves which are now merged in the three Nawins are (21) Tapan, (22) Loothay, (23) Loobone, (24) Banboung, (38) Meedo, (40) Wapyoo, (43) Thitwa, (44) Singoung, (45) Pootkya; also Oopawlangyee, Oopawlangalay, and Yaytha. These names will be excluded from future registers of reserves.

Revised boundaries have also been published of the Thayetmyo East Yoma block notification No. 17, dated the 9th March 1882, consequent on the villagers of Kyoukkway petitioning to be bought out on the same terms as their neighbours of Kopeinwoon and Myagyee were the year before.

An area of about three square miles of the best teak-producing country between the Paday and Nawin watershed and the Koonthee stream has been added to the reserve for a compensation of Rs. 1,100, and a village of 11 houses has to some extent been set up in the plains where they wanted to remove.

Preliminary proposals.

2. The Assistant Commissioner of Myaydeh and the Deputy Conservator of Forests, Prome division, submitted proposals for the following cutch reserves in the Thayetmyo district:—

	Acres.
Talaba	3,189
Sanboke	2,292
North and South Inlay	1,150

The enquiries however were made much too superficially to allow of the papers submitted to be accepted as final proposals.

Demarcation of reserves.

3. The Saingdo reserve has been demarcated with 10 stone pillars and 74 numbers cut in galvanized iron, nailed up at a distance of about 300 feet. The Thabala reserve has been demarcated with 53 stone pillars, one earth mound, 219 galvanized iron plates and 158 teak boards with the numbers painted on them.

The Mindone and Ngawet reserves have been demarcated along the eastern boundary with 54 stone pillars and 690 demarcation boards. The north or frontier boundary of the reserve has still to be demarcated. The cost of this demarcation, exclusively of galvanized iron numbers, which we bought some years ago, amounts to Rs. 484-12-0. The permanent demarcation of the Nawin reserves could not be carried out during the present season, but will be attended to in the beginning of next season.

Compensation paid.

4. During the year the following compensations have been paid:—

(*a*) to the villagers of Kyoukkway Rs. 1,100 to move away from the North Nawin reserve and to renounce all rights in North Nawin and Thayet Yoma block;

(*b*) to the villagers of Kyouksee Rs. 249 for removal from the vicinity of Thabala reserve;

(*c*) to the villagers of Shwaydoungngeh Rs. 213-8-0 for removing from within the Mindone reserve.

Fire-protection.

5. The Prome teak plantation has been protected from fire at a cost of Rs. 37. The protection of the Choungzouk reserve has also been successful and at a greatly reduced rate, the expenditure amounting to Rs. 604 against Rs. 937 in last year. Rs. 324 of the amount expended on fire-protection have been charged in the accounts of the year under review.

6. One breach of rules only within reserves was brought to notice. Moung Seik Kyee and Moung Hmaw, of Sinmeezweh, were fined Rs. 50 each for felling in trees within the Sinmeezweh fuel reserve.

Breaches of forest rules.

7. The villagers of Kadinngazin and Ngaloosan cultivated during the year 102 acres of teak toungya, with the result of 71,223 teak seedlings, for which they were paid Rs. 712-1-6. A result of 700 plants per acre is satisfactory and shows a great improvement on the previous attempts to cultivate made by these villages.

Teak toungyas.

8. The teak toungyas of 1879 and 1880 in the Choungzouk reserve, 148 acres, were weeded twice, once in July and once in September, at a cost of Rs. 466, or Rs. 2-5-0 per acre. The area cut for sowing in the present rains amounts to about 120 acres, of which one-fourth will be sown with cutch instead of teak.

Weeding of former toungyas.

9. Six hundred cuttings of mulberry were planted out, all of which have struck. The last counting of the mahogany plants at Kadinngazin gives only 27, varying between two feet four inches and nine feet eight inches in height.

Cultivation of other trees.

The mahogany in the Prome plantation are planted in too intense shade and hardly grow at all. Two were transplanted to the elephant-shed, where I hear they do well. Two I took down with me and planted them in my garden at Rangoon. They were most carefully treated, but both died down to the root and only one has recovered.

THARRAWADDY DIVISION.

10. The Tarokemaw forest was examined by Captain Grey, the Assistant Commissioner, Poungdeh, and the divisional officer, and definite proposals were submitted for the reservation of 38·4 square miles of in forest. The cost of preliminary demarcation, including a survey of the boundaries, amounted to Rs. 331-7-3.

Reserve proposed.

11. Twenty-nine pillars with posts bearing a serial number were, at a cost of Rs. 27, erected round Gwaydouksan, till then only marked with boundary boards; and 20 mounds, with posts and numbers from 30 to 49, were placed round Bawbin reserve at a cost of Rs. 19. Along the outer line of the main block, from the Bawbin stream to Payagyee, 80 mounds and posts, Nos. 24—108, were put up, costing Rs. 88-8-0.

Improvement, addition, and repairs of boundary-marks of old reserves.

One hundred mounds, Nos. 1—100, were erected round Kangyee at a cost of Rs. 95-8-0; 85 mounds, Nos. 101—185, round the Choungzouk reserve at a cost of Rs. 84-8-0.

In the Minla Gamone block 192 boundary-marks surrounding the Karen area and the Myoung and Ngapein stream were repaired or renewed at a cost of Rs. 60, and the outer boundary-marks at a cost of Rs. 281-8-0.

Eleven mounds with posts were put up along the boundary of the Mokeka and Beelin reserve between the Beelin and Myoung streams, costing Rs. 11-4-0.

In the Thonezeh Kone Beelin block the mounds round the Karen area were renewed and numbered 1 to 155, at a cost of Rs. 60-8-0, and along the outer line from the Hmya to the Meenin stream, mounds, numbered 112 to 327, were repaired and where necessary renewed at a cost of Rs. 89.

12. A party of the cadastral survey were engaged on the Thonezeh and Kone Beelin block throughout the dry season, and it is believed that about 40 square miles of interior work have been completed besides the circuit of the block. The expenditure from the forest budget amounted to Rs. 7,102-8-6, of which Rs. 221-8-0 represents the cost of blazing lines to guide the surveyors.

Survey.

Similar lines, demarcating different classes of forests, &c., were blazed in the Mokeka and Kadin Beelin block at a cost of Rs. 77-8-0, and in the Minhla and Gamone block at a cost of Rs. 76, so as to be in readiness for the next year's operations.

13. In the Bwet reserve three fires occurred, of which only one was of any importance. The first fire broke out on the 23rd March, about 200 feet inside the trace; it was immediately discovered and extinguished, only 200 square yards of bamboo forest being burnt. The fire was undoubtedly incendiary, and probably lighted with a view to driving game out of the forest. No damage was done, and the fire is only mentioned in this report as showing the difficulties that have to be contended with. The second fire took place on the 31st March. It began at 2 o'clock in the afternoon 200 yards south of the main cart-road and fire-trace, and half a mile from the reserve boundary, and ran through 28 acres before it could be put out. The burnt area includes 2½ acres planted with teak last year. The origin of the fire is unknown, but as it broke out at a distance from the road it was probably not accidental. The third fire occurred on the 10th April, and was discovered and put out at once before any damage was done. It broke out close to the site of the first fire and was probably due to similar causes. The total area fire-traced in Bwet was 2,886 acres, of which 2,858 were successfully

Fire-protection.

protected. The cost amounted to Rs. 1,220, or Rs. 577 in excess of the expenditure in 1879-80, the last year the reserve was successfully protected. This is due to two interior lines having been cleared and an increased number of watchers entertained during the dry months.

Nyanleh.

14. Fire broke out four times in Nyanleh. By the first three little damage was done, about an acre of last year's plantings and 109 acres of jungle being burnt through. In each case the fire was caused by sparks from burning kaing grass being carried across the stream which forms the fire-trace. The fourth fire was more destructive, passing through 70 acres of forest containing eight acres of teak toungya plantation made in 1880 and one acre sown with teak in 1879. The fire broke out close to the yas cut for this year's planting the day after they had been burnt, and must have crossed by a smouldering log. Five hundred acres in this reserve were also burnt purposely to facilitate planting. The total area attempted to be protected in Nyanleh was 5,340 acres, fires being successfully kept out of 5,160 acres. The cost amounted to Rs. 1,531. The increase is chiefly due to the formation of an interior line surrounding the 500 acres purposely burnt, but partly also to bad work on the part of the forester and guard in charge of the reserve. Moung Galay, the ranger, was ill in hospital at the time the fire-lines were being cut, and no other officer could be spared to look after the work.

Bawbin.

15. In Bawbin while burning some kaing grass outside the boundary the wind carried the sparks across the stream and 12 acres of the reserve were burnt. The burnt area is mostly occupied by kaing grass, but it includes about three acres stocked with teak planted in 1878. The area successfully protected was 802 acres, and the cost amounted to Rs. 309.

Gwaydouksan, Kangyee, and Myodwin.

16. In Gwaydouksan, Kangyee, and Myodwin fire-protection was completely successful, costing Rs. 91, Rs. 1,051, and Rs. 41 respectively. The protected area in the former reserve was surveyed by Mr. Hauxwell and found to contain 233 acres.

Myoung and Minhla.

17. Of the detached yas on the Myoung and north bank of the Minhla stream, one block of 18½ acres, planted by Panyay in 1874 and 1875, and two acres of a ya, planted in 1875, were burnt through. The fires occurred after the first showers had fallen and only the upper layer of dead leaves was burnt, little damage being done to the teak. The fires are supposed to have been lit purposely by the fire-trace contractor's brother-in-law, with whom the former had quarrelled. The remaining yas, 99 acres in extent, escaped. The cost amounted to Rs. 150.

Minhla and Shoukpin.

18. The yas between the Minhla and Shoukpin streams, aggregating 187·55 acres, were this year included in one fire-trace, embracing an area of about 3,000 acres. With the exception of about 60 acres, the whole of this area was successfully protected, but the burnt portion includes seven acres of teak plantation made by Sawkeh Shway Zin in 1875. The fire was traced to the camp of a Native of India surveyor, belonging to Mr. Talbot's party, who was encamped within the fire-trace. The cost of protection was Rs. 244.

Mokeka Beelin.

19. In the Mokeka Beelin reserve fire-protection was completely successful. The protected area was reduced from 24,260 acres to 20,980 acres by cutting off a triangle on the extreme north-east. The only practicable fire-path along one side of this triangle follows the road from the Beelin to the Zamayee, much frequented by Shan traders, and, as it is a great distance from their teh, the Karens refused to be responsible for its protection. The area excluded was only taken in hand for the first time in 1880. It contains no cultivation, and fire passed through the whole of it last year. The cost of fire-protection was Rs. 1,154.

Thonezeh and Koon Beelin.

20. In the Thonezeh and Koon Beelin reserve 2,180 acres were successfully protected at a cost of Rs. 120.

Prosecutions for breaches of forest rules.

21. Six prosecutions were instituted for forest offences within reserves. Nga Shway Go was fined Rs. 15 for collecting cheroot-leaves in the Kangyee reserve during the fire season. Two men were fined Rs. 2 each for grazing their cattle in the Bwet reserve. Five Karens from the Bawbin reserve were prosecuted for cutting teak over one cubit in girth in their toungyas and fined sums varying from Rs. 10 to Rs. 25 each. Thirteen men, who were found cutting bamboos without a license in the Bawbin reserve, were dismissed with a warning, the trouble of attending the Deputy Commissioner's Court in Tharrawaddy being considered sufficient punishment. In the Shwaylay reserves two cases occurred of purchasers of cutch trees misappropriating trees which had not been sold to them. One man was fined Rs. 60, or in default two months' simple imprisonment, and one man Rs. 25, or in default one month's imprisonment. In the Toungnyo reserve five men, who held cauldron licenses, were found boiling cutch within the Karen area. The Deputy Commissioner declined to allow a prosecution, as it appeared that the men were not aware that Karen areas were closed to cutch-boilers.

Departmental cultivation in dead bamboo forest

22. In the Bwet reserve areas estimated to amount to 250 acres, which had been cleared of dead bamboos by the fire last year, were planted up with teak at a cost of Rs 1,102-12-1, and 50 acres of similar forest sown with cutch-seed at a cost of Rs. 489. The plantations are generally well stocked and the young trees thriving. The cutch-sowings include about 10 acres of old paddy-land at Yaybawsan, on which the kaing grass was cut and the seed sown on mounds one foot high.

In the Nyanleh reserve 200 acres of burnt bamboo forest were planted with teak at a cost of Rs. 1,060-8-0; the plants are numerous and the undertaking promises to be very successful.

Clearing old sowings

23. In the Kangyee reserve Rs 21-12-0 were expended in freeing young teak plants from overgrowth and in girdling jungle trees, suppressed trees were also cleared wherever met with in the Bwet and Nyanleh reserves

Evergreen plantations on fire lines

24. In the same reserve Rs. 27 were expended in planting thitto and gangaw trees along the fire-trace

Toungya plantations

25. The following table exhibits the progress made during the year in toungya plantations The total area so planted now amounts to 2,833 acres.—

Statement showing progress in toungya plantations in the Tharrawaddy division during 1881-82.

Reserve or block.	Situation of plantation.	Name of village planting.	Trees planted.	Number of yas.	Area.	Number of plants.		Cost.		Remarks.
						Total counted.	Average per acre.	Total.	Average per acre.	
					Acres.			Rs. A. P.	Rs. A. P.	
Nyanleh	Near Myoda village ...	Myoda ...	Teak	4	13·50	13,493	999	150 8 5	11 2 4	
Gwaydouksan	Near Gwaydouksan village	Gwaydouksan ...	do.	4	10·40	7,236	695	102 15 5	9 14 4	
Bawbin	Near Bawbin village ...	Bawbin ...	do.	5	16·00	12,088	755	163 9 10	10 3 7	
Do.	Near ditto ...	do. ...	Cutch	2	5 75	7,015	1,220	83 7 1	14 8 3	
Do.	Near ditto ...	do. ...	Shaw	2	6·00	7,971	1,328	90 0 7	15 0 1	
Kangyee	Near Kangyee and Shwayboola villages ...	Kangyee ... / Shwayboola ...	Teak	8	13·50	7,586	561	90 8 3	6 11 3	
Minhla and Mokeka reserve; fire-traced block between the Minhla and Shoukpin streams.	Sources of Teindaw and Shoukpin streams ...	Oungbweh teh ...	do.	14	49·00	32,457	662	385 3 0	7 13 9	
	Sources of Woongeh and Shoukpin streams ...	Shwayzin teh ...	do.	20	82·50	41,382	501	488 10 9	5 14 9	
Mokeka and Kadin Beelin reserve; main fire-traced block.	Mokeka stream ...	Panhleh teh ...	do.	18	145·00	85,002	586	897 12 9*	6 4 11	*Exclusive of ya taxes, which have still to be paid.
	Talaingthat stream ...	Shwaygya teh ...	do.	11	45·00	39,703	660	443 6 6	9 13 7	
	Near Yaytho village ...	Sanya teh ...	do.	12	69·50	43,049	619	471 12 7	6 12 7	
Thonezeh and Koon Beelin	Nat stream ...	Dootee teh ...	do.	19†	77·00	26,170	339*	299 6 6	3 14 2	†Twenty yas containing 81 acres were cut and burnt, but, owing to the illness of one of the cultivators, only 19 yas were planted.
		Total ...	Teak	115	521·40	308,166	591	3,493 14 2	6 11 2	
			Cutch	2	5·75	7,015	1,220	83 7 1	14 8 3	
			Shaw	2	6·00	7,971	1,328	90 0 7	15 0 1	
		Grand Total ...	...	119	533·15	323,152	606	3,667 5 10	6 14 0	

26. In Kangyee a great deal of damage was done by floods, but the results are still sufficiently good. The partial failure of the plantations made by Dootee teh is attributed by the Karens to bad seed.

Weeding of toungya plantations.

27. The teak toungyas planted in 1879 and 1880, and a part of those of 1878, were weeded at a cost of Rs. 1,229-11-11 distributed as follows :—

	Years.	Acres.	Rs.	A.	P.
Bwet	1880-81.	19	26	0	0
Nyaulch	1879 80.	8	20	3	0
Do.	1880 81.	15	30	2	0
Gwaydouksan	1878-79.	7·5	18	7	10
Do.	1880 81.	15·25	30	10	8
Bawbin	1879-80.	18	45	5	0
Do.	1880-81.	27	54	5	2
Kangyee	1879-80.	65	163	1	0
Do.	1880-81.	58	115	13	0
Mokeka Showkpin	1880-81.	37·5	82	8	0
Mokeka Beelin	1878-79.	3	5	0	0
Do.	1879-80.	85·5	160	0	0
Do.	1880-81.	136	268	12	3
Thonezeh	1879-80.	15	77	0	0
Do.	1880-81.	95	132	8	0
Total ..		604	1,229	11	11

Mahogany trees at Kangyee.

28. Towards the end of the rains only nine mahogany trees were alive at Kangyee, and six of these appeared to be in a dying state. They were accordingly removed to the Tharrawaddy forest garden, where they have completely recovered. Want of drainage appears to be the cause of the plants dying at Kangyee.

Tharrawaddy forest garden.

29. The expenditure during the year on the Tharrawaddy forest garden amounted to Rs. 2,394-6 3 :—

	Rs.	A.	P.
Roads	553	0	0
Seed-shed	94	8	0
Experimental plantations and maintenance	1,746	14	3
Total ..	2,394	6	3

The roads constructed are 10 feet wide and aggregate 3,160 feet in length. The cost includes that of four wooden culverts.

It was found impracticable to keep up a record of the exact expenditure on each different plantation or species of tree, nor would there be any advantage in so doing, since the heavy outlay entailed by the exceptional circumstances of the garden prevents the cost of plantations now made from being taken as a basis for future estimates. The soil of the garden is not of itself bad, but it has been subjected for the last 30 or 40 years to constant paddy-cultivation, which has had the effect of compressing the subsoil to a hard impervious mass, on which no tree will thrive until the land has been deeply trenched and drained.

The plantation of *Broussonetia papyrifera* occupies 1¼ acres and is fully stocked. Most of the plants were raised from seed sent from Moulmein, which germinated freely, but a small parcel from Erfurt only produced 90 plants, most of which damped off when put out. The tree appears to be a very quick grower, and would probably pay better than bamboos in artificial plantations for paper-stock. Mr. Oliver notes that the *malaingnweh* used for the manufacture of *parabikes* at Shwaydoung is altogether different from the *malaingbin* (*Broussonetia papyrifera*) of Tenasserim. The former is a large scandent shrub common along the banks of streams throughout the district; it yields an excellent fibre, and the leaves are occasionally used for feeding silkworms.

The blanks in the Wabo (*Dendrocalamus Brandisii*) plantation were filled up at the commencement of the rains by putting out 300 new stocks, but only 69 have taken root. The soil in its present state is not suited for the bamboo, and the long journey from Rangoon killed many of the stocks.

Trees not common to Tharrawaddy.

30. In addition to trees and plants common to the district, the following are now growing in the garden :—

Cycas media	1	plants. (Seed sent from South Australia.)
Eucalyptus gomphocephala	7	plants. (Seed sent from South Australia.)
Eucalyptus citriodora	4	plants. (Seed sent from South Australia.)
Eucalyptus amygdalina (?)	8	plants. (Seed sent from South Australia.)
Tree (name unknown)	9	plants. (Seed sent from South Australia.)
Do. (do.)	1	plants. (Seed sent from South Australia.)
Leguminous creepers (name unknown)	4	clumps.
Swietenia mahagoni	9	plants.
Ficus elastica	12	,,
Vanilla	2	,,
Pithecolobium saman, about	300	,,
Broussonetia papyrifera	4,500	,,
Malaingnweh	2	,,
Morus multiculis	17	,,
Amherstia nobilis	3	,,
Sandoricum indicum (Mesua ferrea), about	100	,,

In the town of Thonezeh some *Pithecolobium* trees, sown in August 1878, are now in flower.

Communications and buildings.

31. In the Thonezeh reserve a large obstruction in the Kodoogweh stream, which years ago had on several occasions been unsuccessfully attacked with gunpowder, was removed with the aid of dynamite, the work being carried out under the direct superintendence of Mr. Vercoe, of Nobel's Explosives Company. The main obstruction was a waterfall with a crooked channel complicated by the presence of a number of boulders. The channel was straightened and widened and the boulders removed, so that there will now be no difficulty in floating out timber. The work occupied only six days, the cost of cooly labour being Rs. 119-8-6, and the blasting material expended 50lbs. gelatine and 138lbs. dynamite. The rock removed is estimated at 300 tons.

The Bawbin stream and tributary known as the Thayet stream was also cleared of some considerable rocky obstructions left by former blasting parties; and the road from Bawbin into the Zamayee was by some blasting and levelling converted into a rideable pass.

RANGOON DIVISION.

Reserves sanctioned.

32. During the year the Upper and Lower Zamayee reserves were sanctioned. The former contains 139½ square miles unburdened by rights and 88½ square miles with toungya privileges; the latter 156½ square miles of forest without rights and a Karen area of 18½ square miles. The Karens of Kayinngatay teh were compensated for removal from their fruit and betel gardens by a payment of Rs. 40, which was made by the Conservator when on tour.

New reserve proposed.

33. A demarcation party, consisting of Captain Raikes, the Assistant Commissioner, Pegu, and the forest officer in charge of the division, proceeded to the Pounglin forests to institute the special enquiry as regards rights and wants of the people with regard to the creation of a reserve in those forests. They had not returned by the end of the official year, but their proposals have since been submitted.

Boundary lines.

34. With regret I report that no progress has been made in permanent demarcation. It was however a case of too much work, and no subordinate could be spared to complete the demarcation of the Illaing and Okekan reserves. All arrangements however have been completed to finish this work the first thing next season. Arrangements are also being made for sending the boundary boards for the Zamayee reserves by boat to Zoungtoo.

The preliminary boundaries of the Hlaing reserve and those of the Lower Zamayee have been inspected during the year.

A cadastral survey party commenced the survey of the Hlaing reserves, but no charges have as yet been made, nor do I know how much of the work has been completed.

Fires.

35. On the 31st March the first fire broke out at the Magayee plantation in the plantation of 1876, and 25 acres were burnt through. There seems to be no doubt about it that the fire was accidental, caused in all probability by a smouldering log which had been overlooked by the fire-watchers, or which was not observed still to glow underneath.

The second and larger fire broke out on 11th April, burning through the whole of the plantation of 1877, amounting to 270 acres. Neither the Deputy Conservator of Forests nor myself have any doubt that the fire was due to incendiarism, though neither the Extra Assistant Commissioner nor the Police Inspector share our opinion; but then neither proceeded to the place where the fire actually began nor examined the only three eye-witnesses of the breaking out of the fire, who place from three different points of observation the origin of the fire on a central side which was not fire-traced. This renders the Extra Assistant Commissioner's decision that the fire originated from carelessness on the fire-trace an impossibility even had the fire kept alive for eight days, the time which had elapsed since the burning of the fire-trace. This also would be hard to believe, as the trace is patrolled. Neither of the fires did any appreciable harm, as Mr. Nisbet, who in June was deputed to examine the forest, reported that the damage done was not of a permanent nature, the plantation being too old to be seriously damaged by a ground-fire after most of the kaing grass had died out.

The cost of fire-tracing 55,862 acres, of which 55,266 acres were successfully protected, amounted to Rs. 9,948.

Breaches of forest rules.

36. In the Okekan reserve a number of trees of the unreserved kinds were felled. The offenders however alleged and proved that the forester in charge had given the permission to cut, telling them that the forest was outside the reserved area. The forester was prosecuted, and although it was shown that the same forester was present with the demarcation party when the reserve was demarcated, it could not be proved that he had accepted an illegal gratification, and the Magistrate only fined him Rs. 25.

Two men were fined Rs. 200 each for cutting 60 logs of in in the Thabyoo reserve, a fine not even equal to the value of the timber felled.

Planting.

37. At Magayee a plantation of 15 acres was formed by some of the Shans, who still remained about. The operation was successful, costing Rs. 165 for labour and Rs. 49 for seed, or Rs. 14-4-0 per acre. There is no doubt that, by improving the communications with Palone, more Shans will be induced to work under the same conditions.

The plantation of 1880, 149 acres, was weeded at a cost of Rs. 396-3-6, or Rs. 2-10-6 per acre.

Evergreen belts.

38. Many of the trees in the evergreen belt have been killed by inundation. Those remaining are three feet high on an average. I believe it will be necessary to kill some of the trees overhead.

Trees and plants.

39. Two hundred and thirty-three *Pithecolobium saman* are growing at Magayee, but do not make the same rapid progress in growth as elsewhere. The mahogany trees, of which 43 are growing in the plantation, are between 1 to 12 feet high and do as well as the soil would lead one to hope. Of 38 *Ficus elastica* plants, the largest is 25 feet high.

The *Ceara* rubber tree grows apparently well, but 11 were killed by elephants; the remaining 23 are from 1 to 11 feet high.

Thirteen old vanilla plants and 48 young plants, raised from last year's cuttings, are now growing at Magayee, and to make fertilization easier a vanillary has been built at a cost of Rs. 212-0-6. Two cuttings planted by Mr. Hearle on the posts of the forest house only two years ago have already flowered, but only three fruits have set.

Thirty-nine *Chevanessia* plants are all that remain of Mr. Strettell's experiment to introduce the *Chevanessia esculenta* in a compact block for the extraction of caoutchouc. This creeper is of extremely slow growth, and it is well worth while that notes should be kept regarding its behaviour under different circumstances, for its commercial value cannot be doubted.

TOUNGOO DIVISION.

Sanctioned reserves.

40. During the year the Kyoukmasin reserve was sanctioned by notification No. 81F., dated the 23rd September 1881. This reserve contains 32 square miles. Sanction was also accorded to the reservation of the Saing reserve, 101 square miles, by notification No. 82F., dated the 23rd September 1881. This raises the total area of reserved forests in the Toungoo division to 559 square miles.

Proposals.

41. The forest officer deputed to Toungoo for demarcation work got dangerously ill of malarious fever, and it was impossible to make any new arrangements for the constitution of a demarcation staff. The reservation of the Swa, Loneyan, and Myohla forests has therefore not advanced.

Proposals for the enlarging of the Thandoung reserve have been submitted; and the area round the Kannee plantation and some of the forests south of the Thoukyaygat stream have been inspected with a view to propose their reservation.

I record here also the necessity of taking the necessary preliminary steps for the reservation of the numerous small teak and pyingado-producing areas in the vicinity of the now building railway, especially in the vicinity of the Koon river, but also further north at Akyaing and other isolated places.

Demarcation.

42. The Kyoukmasin reserve has been demarcated on its southern and eastern sides by pyingado boundary posts and earth mounds. The numbers have still to be affixed.

Towards the west the reserve is bounded by a Prome State reserve and needs no demarcation. On the north its boundary is Upper Burma, and when this boundary is once authoritatively settled, nothing will be better to preserve it than a close line of reserve demarcation boards. The cost of boundary pillars and posts is Rs. 3 each, but only Rs. 60 have been paid before the end of the year.

The Saing reserve has also been demarcated by the erection of 290 boundary pillars and pyingado posts on all but its northern boundary, which again is formed by Upper Burma. The demarcation of the Saing reserve cost Rs. 1,455.

Two of the stone cairns round Thandoung reserve were knocked down by an earthquake and had to be redone: besides this 155 pillars were erected round the Kaboung reserve, but have not been as yet inspected by the divisional officer and consquently not been charged off. The permanent demarcation of the Kaboung will be completed next season.

Fire-protection.

43. The Yaynay reserve, containing 5,760 acres, has been successfully protected at a cost of Rs. 371. The cost of the fire-protection of the Pyoonchoung, including 8,440 acres, amounted to Rs. 443-10-0, and was also successful, only half an acre having burnt accidentally, which, as no damage has been done, is hardly worth mentioning.

The East Swa reserve is comparatively easily fire-protected, and arrangements are in progress by which the surrounding villages undertake the work, being paid by results, though perhaps in the first year it will be necessary to pay them a small advance.

Plantations.

44. The effort to kill out the kaing grass in the kwins on the boundaries of fire-trace reserves has been continued, and Rs. 585-12-0 have been expended thereon. I would have liked to charge this to fire-protection, but the Comptroller-General has ruled that it is a plantation. Three thousand one hundred and twenty-eight strong plants of toungbin, thitto, gangaw, mango, jack, and kanazo have been planted out on the south fire-trace and the Natsee kwin on the boundary of the Pyoonchoung reserve.

A ya has been cleared on the Pyoonchoung for experiments with shaw and letpan coppice for producing fibre.

All teak plantations in the Pyoonchoung have been cleared of creepers, and thinnings have been begun in those of 1866, 1867, 1868.

Introduced trees and plants.

45. Of the mahogany plants at Pyoonchoung one only is alive and reported to do well. One was recently pulled out and killed by an elephant. The *Pithecolobium saman* trees are doing well.

Both tea and cinchona have proved an utter failure at Pyoonchoung; they cannot live through the hot dry months of March, April, and May. Even the coffee, which stands drought infinitely better, died one after the other, and only the last 12 plants, which were transplanted to the rest-house, have escaped and do very well with constant watering during the hot season.

Thandoung plantation.

46. An accurate survey of the plantation has been made, showing it to be 83·28 acres exclusively of the area cleared for potato-cultivation.

The enumeration of plants submitted by last mail shows 54,048 plants in the permanent plantation.

This year's expenditure amounted to Rs. 3,139-15-8, raising the total cost to Rs. 50,203.

During the year 957 cinchona plants were destroyed to make room for the barracks of the experimental sanitarium, and probably a considerable portion of the plantation will have to be given up to the Military Department. At present the plants are only destroyed on the place actually occupied by the buildings.

Five thousand young cinchona plants have been indented for by Mr. Petley.

Coffee and tea.

47. Some 3,400 coffee and 2,500 tea plants are now growing in Thandoung and are evidently in good health. The experiments will be continued with Burma-grown seed. The oldest three of our coffee plants seeded this year.

Broussonetia and *ficus*.

47*a*. Some Japanese *Broussonetia* seed was sown, germinated well, and will be planted out. Ten *Ficus elastica* plants, raised from cuttings at Magayee and put out in July last, look healthy.

SHWAYGYIN DIVISION.

Forest reserve.

48. Rs. 200 were paid to the villagers who formerly resided in Binbyee as compensation for their removing, thus completing the case of reserving the Binbyee forests.

New proposals.

49. Proposals have been submitted by the Deputy Commissioner of the district and the Assistant Conservator in charge for the reservation of the Wabalatkwin forests.

CHAPTER II.

CONTAINS nothing of special note as regards any particular division.

CHAPTER III.

WORKING AND YIELD.

1.—Timber and other Forest Produce extracted by Government agency.

PROME DIVISION.

Extraction of teak.

50. No changes took place amongst the contractors extracting teak in this division.

The season was favourable and the following number of logs were extracted from the several forest ranges :—

Name of forest.	Number of logs of teak.	Cost of timber.	Average per log.
		Rs. A. P.	Rs A. P.
Mindone			
Nawin, North	94	1,484 10 0	15 12 8
Nawin, Middle and South	.....	.....	.....
Paday	1,811	21,070 2 0	11 15 6
Booleh	581	7,505 13 0	14 4 0
	921	13,469 13 0	14 10 0
Total ...	3,357	44,190 6 0	13 2 7

Of the above, 3,268 were delivered at the Rangoon Depôt and 79 were sold to contractors of the Public Works Department at Rs. 67 per ton, yielding Rs. 6,630-15-0.

One hundred logs, extracted from the Mindone forests, in excess to those shown in the table, were formed in a raft late in the season; they stranded below Prome and have not as yet been floated off. Their account has not been adjusted as yet.

Some small teak scantlings, which have been taken for experimental disposal to Thehgone and Sinmeezweh railway-station, were sold at Rs. 50 per ton.

Fifty-two logs of inferior dead teak poles, brought out from the Mahathaman forest last year, brought Rs. 603.

No timber of other kinds was extracted during the year, but 26 logs of thitya still on hand, containing about one-third of a ton each, were sold at Rs. 118.

The advances made for extraction of timber during the year have, with the exception of Rs. 715-6-0 due on the raft stranded below Prome, all been recovered. But already large advances, amounting to Rs. 23,000, had to be made on 5,000 teak logs felled and dragged from the Booleh. These advances were necessary, as additional elephants had to be brought for the increased work.

THARRAWADDY DIVISION.

51. Twenty-six contractors were employed in the extraction of teak during the year and brought out 8,920 logs distributed among the different forests as follows :—

Teak timber.

			Rs. A. P.
Shwaylay	forest,	856 logs, costing	8,610 15 0
Toungnyo	do,	1,406 „ costing	12,566 15 0
Minboo	do,	624 „ costing	5,344 9 0
Bawbin	do.,	1,783 „ costing	16,300 13 9
Gamone	do..	1,225 „ costing	11,191 13 0
Minhla	do.,	784 „ costing	6,408 5 0
Mokeka	do,	164 „ costing	1,457 0 0
Kadin Beelin	do.,	1,023 „ costing	8,616 2 0
Kone Beelin	do.,	137 „ costing	1,100 8 0
Thonezeh	do.,	968 „ costing	8,511 15 9
Total ..		8,920 logs costing	80,171 10 9

Of the above, 8,720 logs were delivered by the contractors in Rangoon and 176 logs at the Okepo railway-station. Sixteen logs, containing 784 cubic feet, were sold at the Thonezeh bridge for Rs. 364-3-1; three logs, containing 204 cubic feet, sold to the Public Works Department at the Toungnyo for Rs. 186; and five rejected logs sold in the Myitmaka for Rs. 24-2-9.

52. Ten logs of toukkyan were delivered at the Zeegone railway-station at a cost of Rs. 30, and forwarded by train to Rangoon at a further cost of Rs. 51-12-0.

Toukkyan timber.

53. Fifteen dwanee logs were brought to the Okepo railway-station at a cost of Rs. 67-8-0.

Dwanee timber.

54. The timber delivered at Okepo (176 logs teak and 15 dwanee) were disposed of as follows :—seven teak logs were used in constructing a derrick for loading timber and 184 logs sent to Rangoon at a cost of—

Timber sent by train from Okepo.

	Rs. A. P.
Railway freight	1,334 0 0
Loading charges	55 8 0
Total ..	1,389 8 0

or Rs. 7-8-10 per log. The cost of bringing the 191 logs to Okepo amounted to Rs. 1,583-8-0 or Rs. 8-2-4 per log, so that the average amount paid for each log sent by train to Rangoon was Rs. 15-11-2, while timber sent by water from the same forest only averaged Rs. 9-3-2 per log.

Neaped timber.

55. Two thousand four hundred and three neaped logs were counted in the various floating streams at the end of the rains.

Outstandings.

56. On the 31st March 1882 nine contractors had outstandings amounting to Rs. 15,457-3-0 against them. This sum is fully covered by work done or by mortgages on elephants. Seventeen of the contractors' elephants died during the year, and it was necessary to make advances to replace these as well as to purchase additional animals to work out the timber girdled in 1879-80.

RANGOON DIVISION.

Teak.

57. One thousand two hundred and twenty-nine teak logs were extracted; 463 logs from the Pegu forest were delivered at the Rangoon Depôt at a cost of Rs. 4,844-3-0, or Rs. 10-7-5 per log. Of this sum, Rs. 10 remained unpaid at the end of the year. Six hundred and seventy-six logs were extracted from the Pegu forest on the half-profit principle. Of these, 337 were sold at Pegu and 339 were delivered at the Rangoon Depôt; they were all sold, and the contractors' half amounted to Rs. 9,877-4-6, or Rs. 14-9-9 per log. Ninety logs were worked out from the Okekan stream: these were divided at Taboowa, the contractors taking 45; the remaining 45 were floated to the depôt at a cost of Rs. 86.

Timber of other kinds.

58. Eight hundred thitka logs were delivered at depôt. Of these, 369 came from Pounglin and 431 from Pegu. They cost Rs. 7,182-11-4, or Rs. 8-15-8 per log. Of this amount, the cost of 55 logs, Rs. 440-6-2, is still due to the contractor. Four pyinma logs from the Pounglin forest were sent to the depôt at a cost of Rs. 22, or Rs. 5-8-0 per log.

Timber for railway.

59. Sixteen thousand three hundred and forty-five pyingado logs were cut in the Hlaing reserves, 16,042 were handed over to the Rangoon and Sittang Valley State Railway, and 303 were delivered to the Palone station, of which 26 were sent to the Botatoung Depôt by rail and the remainder are still at Palone.

In all 17,247 logs have been made over to the railway, and their cost was as follows:—

		Logs.	Rs	A.	P.
Paid in 1880-81	.. ..	1,205	7,141	8	0
Do. 1881-82	.. ..	15,767	89,270	10	0
Do. 1882-83	.. ..	275	1,101	8	0
	Total ..	17,247	97,513	10	0

or Rs. 5-10-5 per log. For these logs the Railway Department accepted bills amounting to Rs. 1,46,795-7-0, or Rs. 8-8-0 per log nearly.

The 303 logs at Palone station cost Rs. 1,985-4-0, or Rs. 6-8-10 per log. The railway charges on 26 logs amounted to Rs. 139-2-0, or per log Rs. 5-5-7.

Neaped logs.

60. In the Rangoon division 27 logs of neaped teak and 240 of thitka were counted.

TOUNGOO DIVISION.

Teak.

61. In the Toungoo division 4,240 logs of teak were extracted. Of these, 428 were sold locally, of which at present I can trace only 413 in the abstract of income and expenditure, realizing Rs. 8,061-12-4, 196 logs received in the Toungoo Depôt, 3,551 were received at the Rangoon Central Depôt, leaving 233 logs to be accounted for as timber in transit on the Sittang, none having been reported as lost or drift.

Average rates.

62. The following table shows the timber extracted from the different forests and paid for during the year, exhibiting an average of Rs. 15-6-2 per log as it includes 1,221 logs extracted on the half-profit principle. The average per log brought out under other contracts is not above Rs. 13.

These profitable rates have to be given, or we would not be able to extract the timber left in the most difficult places only :—

Forests.		Teak.	Cost of timber.	Average per log.
			Rs. A. P.	Rs. A. P.
Kaboung		1,148	14,680 4 9	12 11 10
Swa		77	1,089 8 1	13 7 11
Saing		54	736 8 0	13 10 2
Pyoo		4	36 8 0	9 2 0
Myohla	Half-profit principle logs sold at Toungoo. ...	149	1,229 12 0	8 4 0
Koonoung	...	4	89 8 0	22 6 0
Kannee	...	116	704 1 0	6 1 1
Binbyeh	...	6	220 0 5	36 10 9
Thoukyaygat	...	95	904 8 0	9 8 4
		370		
Myohla, Koonoung, Kwaythay, Kannee, Binbyeh, Thoukyaygat, Koon	Half-profit principle logs sold at Rangoon. ...	851	18,935 8 0	22 4 0
	Total ...	2,504	38,526 0 8	15 6 2

Teak sleepers.

63. Up to the end of the year 528 teak sleepers were made over to the Railway, obtained from trees felled on the railway line.

Sleepers of other kinds.

64. During the year 55,213 pyingado sleepers and 20,574 lehza sleepers were also made over to the Railway. The balance of the contract with the Railway was also completed, but the sleepers have not been paid for and not been made over.

The cost of all sleepers, including the 528 of teak wood, amounted to Rs. 1,09,198; and the value of the timber used for producing 76,115 sleepers is estimated at Rs. 19,000 at Rs. 5 per ton. The amount received, Rs. 1,24,011, does not therefore represent the market value of the sleepers. Four hundred and eighty-one logs of thitka and pyinma were extracted, 879 logs were paid for, costing Rs. 4,264, or Rs. 11-4-0 per log. Twenty-six lehza were sold locally, realizing Rs. 423-11-10, or Rs. 16-4-9, 344 logs were despatched to the Rangoon Depôt, and 111 were in hand at Toungoo.

SHWAYGYIN DIVISION.

Teak.
Timber of other kinds.

65. During the year 65 logs of teak were extracted under the half-profit principle, costing Rs. 1,840, as well as 206 kanyin trees of large girth.

Sleepers.

66. Up to the end of the year 18,254 sleepers of mixed timber, but mostly pyingado, were extracted, but only 9,254 were made over to the Railway Department. This operation again does represent a loss if the price of the timber required for their production is calculated at Rs. 5 per ton.

Outstandings.

67. On the 31st March 1882 the outstandings by contractors in the Shwaygyin division amounted to Rs. 2,153, of which Rs. 1,968 are covered by second mortgage on the steam saw-mill at Shwaygyin.

Sixteen thousand one hundred and eighty-six rupees of the Agency outstanding against contractors belong also to this division and are equally covered by mortgage of the saw-mill. All these outstandings will be worked off during the year.

WESTERN DIVISION.

Teak.

68. Fifty-seven very inferior teak logs were extracted during the year; they formed part of timber extracted by the late contractor Moung Pay, whose outstandings were during the year charged off to profit and loss. Nothing remains therefore to be debited against this timber.

Timber of other kinds

69. One thousand and eighty logs of timber of other kinds were extracted during the year, of which 729 have been paid for, costing Rs. 5,728-9-0, or Rs. 7-13-8 per log. Of this sum, Rs. 84 has been charged in last year's accounts.

Outstandings.

70. Arrangements had been made to supply the jail at Bassein with 1,500 tons of timber, and consequently large contracts were given out, under which outstandings amounting to Rs. 10,708 are still unadjusted at the end of the year. During the year 110 logs were sold to the jail for Rs. 1,464-2-3, or Rs. 13-4-11 per log.

Balance of timber difficult to sell.

71. However, the construction of the jail saw-mill was countermanded, and we are left with a balance of 998 logs of timber at Bassein, a balance which will increase every day as I cannot stop the contracts. Both the Forest Department as well as the contractors, who in hope of a permanent work have bought elephants, will lose heavily.

PROME DIVISION.

2.—Drift Timber operations.

Drift.

72. The control of drift timber operations in the Irrawaddy was altogether left in the hands of the officer in charge of the Western division.

THARRAWADDY DIVISION.

Teak waif in kaing grass.

73. Forty-one logs of teak lost in the kaing grass, or buried in the sandbanks near the Beelin stream, were extracted on the half-profit principle The timber realized Rs. 504-2-3.

Thirty-six logs in similar places on the Myitmaka were extracted and sold for Rs. 777-14-3 to purchasers barring cost of collection.

RANGOON DIVISION.

Number of logs salved.

74. From the Rangoon and Pegu river the following logs were salved and delivered at the depôt :—

220 teak,	42 pyinma,
27 thitka,	89 in,
114 kanyin,	63 other kinds,

altogether 525 logs, which cost Rs. 1,702-8-0. On last year's account Rs. 324-4-0 were paid for 86 logs delivered in the depôt.

Confiscated timber.

75. One hundred and seventy-one logs of confiscated timber were also delivered at the depôt at a cost, for floating and guarding the same, of Rs. 384-8-0. These confiscated logs consisted of 43 logs of the reserved kind felled without a permit and 127 logs of light wood felled without permission in the Okekan reserve. One confiscated log was sold locally for Rs. 10.

TOUNGOO DIVISION.

Number of logs salved.

76. During the year 2,304 logs of teak were salved at a cost of Rs. 3,838, 2,030 logs were returned to claimants on the payment of salvage amounting to Rs. 7,135, 261 logs were sold locally, of which however only 248 can be traced in the abstract of expenditure and income, realizing Rs. 4,281-4-10, a balance of 10 is at hand in Toungoo, and three have been sent to Rangoon Depôt.

SHWAYGYIN DIVISION.

Number of logs salved, delivered, &c

77. During the year under review 5,211 logs were collected and delivered at the Myitkyo Depôt, costing, inclusively of the purchase of canes, dragging, &c., Rs. 9,726. Out of these, 4,655 logs were made over to claimants on payment of Rs. 15,241-12-0, five logs were sold, and 60 logs drifted away during a heavy flood. The balance in depôt is 491 logs.

Ninety logs of sea-drift were collected and sold for Rs. 2,459-15-0, of which one-half went to the drift timber collector.

WESTERN DIVISION.

Number of logs salved, collected, delivered, &c.

78. In the Western division 616 logs of drift timber have been collected, costing Rs. 2,284, or Rs. 3-10-0 per log, as well as 94 logs of sea-drift timber for Rs. 1,643, or about Rs. 17-8-0 per log. Of these, 216 logs of river drift timber have been made over to owners, 144 at Rs. 6 salvage, 52 at Rs. 5, and 20 at Rs. 4. Three hundred and sixty-two logs have been sold on Government account for Rs. 10,855. The 94 logs of sea-drift timber have also been sold at Rs. 3,391, of which the contractor gets half. The balance was in hand at the end of the year.

RANGOON AGENCY.

79. By the Rangoon Agency 269 logs of drift were collected at a cost of Rs. 222-6-0. Of these, 233 were made over to claimants on the payment of Rs. 391 8-0 salvage, 21 logs were sold for Rs. 651, and 15 were left in depôt.

Salvage, collection, &c

One hundred and thirty-two logs of sea-drift were also brought up, of which two were returned to claimants on payment of Rs. 63-14-6 and 110 logs were sold for Rs. 5,050, leaving a balance of 20 logs on hand at the end of the year.

Kemmendine Timber Depôt, Alone.

Timber in hand

80. The balance of timber in hand on 1st April 1881 was—

Teak.

Logs.		Crooks.	Sleepers.	Tons.
I class.	II class.			
472	6,472	...	79	6,273

Woods of other kinds.

Logs.	Sleepers.	Tons.
...	...	...

Arrivals of timber.

81. The arrivals of timber during the year, as exhibited in Form 60, are—

		Teak.	Woods.	Total.
Thariawaddy		8,889	...	8,889
Rangoon		847	804	1,651
Prome		3,268	...	3,268
Shwaygyin		65	206	271
Toungoo		3,551	382	3,933
Agency ...	Logs	...	88	88
	Sleepers	...	22,468	22,468
Total ...		16,620	23,898	40,518
Drift and confiscated timber ...	Rangoon ...	320	587	907
	Agency ...	350	51	401
Total ...		670	638	1,308
GRAND TOTAL ...		17,190	24,536	41,726

Teak.

Logs.		Crooks.	Sleepers.	Tons.
I class.	II class.			
2,065	15,125	...	..	16,540

Woods of other kinds.

Logs.	Sleepers.	Tons.
2,068	22,468	2,064

Disposals.

82. The number of logs and sleepers disposed of during the year and sums realized thereon, as exhibited, are—

		Rs.	A.	P.
Auction sales	15,121	7,06,797	0	0
Indent do.	917	62,199	1	7
Sleepers	22,468	41,338	2	0
Drift timber	622	14,740	0	0
Ditto to claimants	517	1,558	6	6
Total ...	39,645	8,26,632	10	1

giving an average of Rs. 47-15-2 per log, or Rs. 48-1-7 per ton, exclusive of sleepers and drift timber.

Teak.

Logs.		Crooks.	Sleepers.	Tons.
I class.	II class.			
2,120	13,822	...	...	15,780

Woods of other kinds.

Logs.	Sleepers.	Scantlings.	Tons.
1,285	22,468	...	2,056

Timber disposals according to divisions.

83. The following table shows the amount and kind of timber, &c., sold on account of the different divisions :—

Division.	Description of timber.	No. of pieces.	Amount.		
			Rs.	A.	P.
Tharrawaddy ...	Teak logs	10,528	4,85,778	4	0
Rangoon ...	Teak logs	884	41,804	1	3
	Woods of other kinds	409	9,688	0	0
	Drift teak logs	276	8,341	4	0
	Drift woods of other kinds	471	5,828	12	0
	Total ...	1,990	60,657	1	3
Toungoo ...	Teak logs	2,031	1,14,916	7	9
	Woods of other kinds	165	5,384	0	0
	Total ...	2,196	1,20,300	7	9
Shwaygyin ...	Teak logs	65	1,840	0	0
	Woods of other kinds	110	2,770	0	0
	Total ...	175	4,610	0	0
Prome	Teak logs	1,858	1,05,428	12	7
Agency ...	Woods of other kinds	38	1,391	8	0
	Pyingado sleepers	22,468	41,338	2	0
	Drift teak logs	350	7,041	6	6
	Drift woods of other kinds	42	87	0	0
	Total ...	22,898	49,858	0	6

Depôt balance.

81. The balance of timber in hand at the Government timber depôt at the close of the official year was—

Teak.

Logs.		Crooks.	Sleepers.	Tons.
I class.	II class.			
417	7,775	...	79	1033

Woods of other kinds.

Logs.	Sleepers.	Scantlings.	Tons.
833	..	...	908

valued at Rs. 32-2-5 per log all round, or a total of Rs. 2,92,730-8-0, as per classified list of timber in hand on 31st March 1882.

The following table shows the amount of timber in hand on account of the several divisions at the close of the year :—

Division.	Teak logs.	Logs, woods of other kinds.	Teak sleepers.	Total.
Tharrawaddy	4,772	...	...	4,772
Rangoon	48	506	...	554
Prome	1,410	...	...	1,410
Toungoo	1,940	218	...	2,158
Shwaygyin	...	96	...	96
Agency	22	13	79	114
Total ...	8,192	833	79	9,104

Girdling.

85. As regards girdling *see* special Report for 1881-82.

EXPORT LINES, THARRAWADDY.

Floating streams

86. The outlets in the Toungnyo stream are at present being closed so as to confine the water to one channel, which, it is hoped, will have the effect of causing a scour in the bed of the stream. At the end of the rains the lower part of the cut made by the Public Works Department completely silted up, but the water scoured out an old channel, which the contractors say is better suited for floating timber than the Public Works Department cut.

The Bawbin stream was cleared by the contractor working that forest, and the channel is now being further improved by extracting stumps of trees, &c.

The lower course of the Gamone stream below Toogwa not to be confounded with the village of that name at the junction of Toung and Too streams. Toogwa has taken an entirely new course, now flowing into the Satpoke stream. It has been cleared of rubbish and jungle by the contractor, and the outlets near the railway are at present being closed.

About two years ago a "yo" was formed between the Myolay stream and the Too, the latter a feeder of the Toung, a stream of considerable size, rising in the Yoma. The result was that the Toung deserted its old course and flowed up the Too and through the "yo" into the Myolay. The latter is an insignificant stream, unable to carry off the water now poured into it, and a large area of land, a little south of Gyobingouk, is in consequence flooded. The Public Works Department are at present endeavouring to restore the old course of the stream by bunding the head of the outlet.

At the commencement of the rains the Minhla stream was found to be completely silted up. The obstruction was caused by a number of kanyin logs, which had been thrown into the stream without being followed up by elephants. The kanyin logs were removed by our contractors, and after a few logs had been dragged along the stream the scour was sufficient to clear it for floating. A part of the cost of removing the obstructions was recovered from the kanyin owners, but the excessive labour of moving heavy logs imbedded in the sand caused the death of three elephants, a heavy loss to the contractors. In future to avoid this state of things I propose levying the duty on kanyin timber before it leaves the forest. The logs will then be too valuable for the owner to trust to chance for their floating out.

SHWAYGYIN.

Fisheries closed.

87. In the Shwaygyin division the fisheries in the following streams have been closed:—

Inbalaweh,	Thanzeik, and
Waing,	Mohkadoo,
Kyouktan,	

all situated in the Pada stream, and no new fisheries will be sold in the more important streams crossing railway and canal.

The question is still under discussion, and how far the rest of the fisheries will be closed cannot as yet be stated. No doubt in established tidal creeks, backwaters, and old river beds the harm done by them is not very great, and we may be quite satisfied if they are stopped in all streams the sources of which are on hilly ground.

Timber removed by Purchasers and Trade and Free Permits.

PROME DIVISION.

Teak.

88. Sixty standing trees of II class teak timber in the neighbourhood of Shwaybandaw and Myohla were sold to contractors of the Public Works Department, 50 tons to the police, and 10 tons for bridge-building near Alanmyo, at the rate of Rs. 35 per ton. Of these, 76·2 tons have been paid for, realizing Rs. 2,667. Five hundred and seventy-one green teak trees in paddy-fields were sold at prices varying from Rs. 10 to Rs. 16 per ton: Rs. 2,426-4-6 were received from this source. One thousand four hundred and fifty-seven pairs of teak cart-wheels were worked out from the otherwise unsaleable wood at Mahathaman, for which Rs. 2,914 was realized. Another Rs. 313-4-8 were received from the sale of refuse teak in the Mahathaman forest.

Cutch.

89. Five thousand cutch trees were sold to the Bombay-Burma Trading Corporation, Limited, at Rs. 3 a tree in the Tindaw, Sasoowa, and Thayetmyo East Yoma reserves, but of these only 249 have been paid for and extracted.

Two hundred trade permits for timber of reserved kinds were issued from the Prome Forest Office during the year, the fees amounting to Rs. 819-4-0. The trees were,—in 2,007, at four annas per tree, and ingyin, thitya, pyinkado, &c., 635, at eight annas.

The fees from trade permits issued by the Deputy Commissioner of Thayetmyo amounted to Rs. 2,228 and by the Prome Deputy Commissioner Rs. 26-8-0.

The tonnage revenue of both Thayetmyo and Prome districts collected by the forest clerk at Yatoung and the Prome Forest Office amounted to, for in Rs. 4,487-2-9 and for thitya, ingyin, pyingado, &c., Rs. 2,467-4-0.

The trees brought out by trade permit-holders are generally very small, seldom averaging half a ton. This year the total revenue is about three times the permit fees.

The following is a comparative statement of the revenue for timber of reserved kinds during the last three years:—

	Rs.	A.	P.
1879-80	7,630	4	8
1880-81	6,861	14	5
1881-82	10,028	3	0

Free permits.

90. Free permits have been granted for 26,905 trees in the Prome district and for 16,178 in the Thayetmyo district.

THARRAWADDY DIVISION.

Timber sold standing.

91. Twenty-six standing teak trees that had been girdled in the Toungnyo forest in 1879-80 were sold to the Public Works Department for Rs. 3,094. The trees contained 13,575 cubic feet.

Four thousand eight hundred and seventy-six cubic feet of refuse teak timber were sold *in situ* for Rs. 1,355-1-8. Teak timber from paddy-fields realized Rs. 8,861-8-0, 8,619 trees, estimated to contain 900 tons, being disposed of. In reserves 1,551 cutch trees were sold for Rs. 4,813 and 2,090, cubic feet of thingan, pyinma, toungpoinneh, tharapee, and thanday for Rs. 117-6-8.

Trade permits.

92. Seven hundred and twenty-one trade permits were issued during the year. The revenue from felling fees and tonnage is shown below :—

Tree.	Felling fees.			Tonnage.			Total revenue.		
	No. of trees.	Rs.	A.	P.	Cubic feet.	Rs.	A.	P.	Rs.	A.	P.
Pyinma	314	78	8	0	17,625	734	8	10	812	11	10
In	2,394	598	8	0	122,309	4,892	14	6	5,491	10	6
In saplings	1,005	101	8	0	...	.....			101	8	0
Pyingado	678	339	0	0	55,543	4,998	14	0	5,337	14	0
Kanyin	733	366	8	0	10,682	957	1	8	1,323	9	8
Thingan	53	26	8	0	1,570	141	12	7	168	4	7
Cutch	30	15	0	0	225	20	4	6	35	4	6
Ingyin ... ... / Thitya	27	13	8	0	747	67	6	6	80	14	6
Total ...	5,234	1,539	0	0	208,651	11,812	9	2	13,351	9	2

The above table includes permits for 520 pyingado trees issued to the Public Works Department and tonnage on 55,243 cubic feet, for which Rs. 5,231-14-0 were realized.

Free permits.

93. The following is an abstract of free permits issued :—

Number of permits issued.	Office from which issued.	Name of tree.									Total.
		Cutch	Pyinma.	Ingyin.	Thitya.	Pyingado.	In.	In saplings.	Thitsee.	Kokeko.	
115	Deputy Commissioner, Tharrawaddy ...	160	446	...	675	1,131	72	8	...	...	2,492
95	Assistant Commissioner, Zeegone ...	1,025	45	156	380	887	475	...	...	...	2,968
44	Assistant Commissioner, Poungdeh ...	...	45	...	20	215	136	...	...	...	416
136	Deputy Conservator, Thanrawaddy. ..	660	422	536	525	884	417	1,141	...	...	4,588
482	Assistant Conservator, Poungdeh ...	1,029	669	4,115	167	4,898	2,818	4,261	5	1	16,963
872	Total ...	2,874	1,627	4,807	1,707	7,515	3,418	5,413	5	1	27,427

RANGOON DIVISION.

Trade permits.

94. Trade permits were issued for 9,747 trees, yielding a revenue of Rs. 2,854-8-0; and tonnage was collected on 15,822 logs, yielding a revenue of Rs. 28,557-12-0.

Free permits.

95. Free permits were granted by civil officers for 851 trees; by forest officers for 1,863 trees.

Number of all kinds passing revenue stations.

96. The following table shows the number of logs of the reserved and unreserved kinds, as well as bamboos and other forest produce, which passed the Awaing, Hlehgoo, and Tawlateh revenue-stations :—

Statement showing timbers, &c., passed at revenue-stations during the official year 1881-82 not paying duty.

Sub-division.	Thayet.	Kyee.	Yone.	Zinbyoon.	Leiu.	Tein.	Toukshe.	Layyaw	Toukkyan.	Thanday.	Thabyay.	Sit.	Lotpan.	Doedoo.	Banbway.	Binga.	Toungthakoot.	Sekkadone.	Kyawthoo.	Toungsegaing.	Thitnoo.	Tarapee.	Macc.	Maneenwga.	Yindike.	Thapan.	Panga.
Hlaing	9,039	72	791	153	93	2,469	360	12	74	2	39	10	68	76	2	108	35	42	72	206	4	1	107	130	46	23	8
Pegu	42	...	...	1,414	34	651	...	...	206	...	...	...	...	...	...	1,500	...	...	...	...	...	16	141	...	...	...	...
Pounglin	508	5	...	1,118	302	1,227	58	...	12	...	104	39	...	81	94	146	75	...	...	...	225	392	266	16	114	...	...
Total ...	9,584	77	791	2,685	429	4,347	418	12	292	2	143	49	68	157	96	1,754	110	42	72	206	229	409	514	55	160	23	8

Statement showing timbers, &c., passed at revenue-stations during the official year 1881-82 not paying duty —(continued).

Sub-division.	Yagaing.	Petwoon.	Myoukugo.	Nathanaing.	Koozan.	Nabay.	Pouk.	Oukchinza.	Ngoo.	Seikchee.	Lawnee.	Toungbeinya	Onehneh	Kyetyo.	Nashagyee.	Toungthayet.	Myoukchaw.	Yamanay.	Bohbya.	Karaway.	Kounghmoo.	Linyaw.	Toungkathit.	Malhwa.	Myay.	Kywehdanyin.	Myalaygwin.	Yayawa.
Hlaing	315	87	1	8	10	39	5	14	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pegu	...	505	...	...	...	30	...	835	230	313	374	664	21	118	33	78	77	13	120	2	1	76	26	...	...	...	...	...
Pounglin	...	54	2	...	...	7	1	111	46	3	11	133	8	55	64	...	...	16	...	...	...	514	...	13	7	2	51	208
Total ...	315	646	3	8	10	76	6	960	276	315	365	796	29	173	97	78	77	29	120	2	1	590	26	13	7	2	51	208

Statement showing timbers, &c., passed at revenue-stations during the official year 1881-82 not paying duty—(concluded).

Sub-division	Monedaing	Chinyoke	Nagyee	Nalingyaw	Thitsein	Thakootpo	Thagyaouksoung	Kyoungdouk	Naw	Thadee	Bootalet	Thitsat	Toungmayo	Zawgyeeouktoke	Bonemehza	Myouksein	Sawpya	Momaka	Thitya	Total	Bamboos	Cane	Saloo	Thetkeh	Shaw	Toungtan	Remarks
Hlaing ...	...	...	...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...	14,430	447,790	...	...	...	...	...	Awine
Pegu	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	7,520	2,184,327	9,894	10,02,200	46,150	9,600	156,100	Tawlateh
Pounglin ...	163	3	1	214	1	7	2	381	36	79	20	17	116	181	79	7	14	1	187	7,591	2,122,222	...	...	...	550	...	Hlehgoo
Total .	163	3	1	214	1	7	2	381	36	79	20	17	116	181	79	7	14	1	187	29,541	4,754,339	9,894	10,02,200	46,150	10,150	156,100	

TOUNGOO DIVISION.

Trade permits.

97. Trade permits were issued for 824 trees of the reserved kinds, the permit fees on which amounted to Rs. 357-4-0. Three hundred and eleven logs, extracted under trade permits, yielded a tonnage revenue of Rs. 1,348-6-11 as per detail in the following statement :—

Range.	Logs.	Thingan.	Logs.	In.	Logs.	Pyingado.	Logs.	Padouk.	Logs.	Total.
		Rs. A. P.				Rs. A. P.		Rs. A. P.		Rs. A. P.
Thagaya ...	151	902 9 8	...	...	9	60 15 9	2	10 14 9	162	974 7 9
Zayyawadee	74	207 4 5	...	...	...	.....	3	5 13 2	77	218 1 7
Bonemawadee	...	.....	...	...	34	87 3 7	38	78 10 0	72	160 13 7
Total ...	225	1,109 13 8	...	...	43	148 3 4	43	90 5 11	311	1,348 6 11
Add Miscellaneous II*a*, Revenue, as per form No. 68						...	...	...	...	351 5 3
						Total tonnage duty	...	...	...	1,699 12 2
						Add felling fees	...	...	...	357 4 0
						Total II*a*	...	...	...	2,057 0 2

Free permits.

98. The following table shows the number of trees granted under free permits by the different Myo-okes :—

Myo-okes.	Thingan	Thitka.	Kokeko.	Padouk.	Pyingado.	Anan	Thitya.	Ingyin.	In.	Pyinma.	Kanyin.	Sha.	Mixed.	Total.
Thagaya	..	..	1	37	1,343	..	875	30	1,570	779	..	10	..	4,645
Zayyawadee ..	..	..	..	6	363	..	147	10	251	1,529	..	..	305	2,611
Bonemawadee ..	..	..	..	27	1,570	..	1,280	982	1,596	1,199	..	22	379	7,055
Myoma	..	..	2	23	407	..	708	953	1,152	254	..	..	202	3,701
Kannee	..	..	..	9	297	..	214	65	87	124	..	..	10	806
Kyathoungdoung ..	..	..	..	..	60	..	..	..	..	10	..	..	60	130
Total ..	.	..	3	102	1,040	..	3,224	2,040	4,656	3,895	..	32	956	18,948

SHWAYGYIN DIVISION.

Teak.

99. Three small teak trees were sold for Rs. 22-12-5, and six refuse teak logs realized Rs. 100.

Other kinds.

100. One thitka log was sold for Rs. 15, and one pyinma and two thingan boat-hulls fetched Rs. 39-2-0.

Trade permits.

101. During the year under review trade permits were issued for 783 trees of reserved kinds. The cutting fees amounted to Rs. 340, and the tonnage fees on 1,009 logs amounted to Rs. 2,639-6-4, total Rs. 2,779-6-4.

Free permits.

102. The following statement exhibits particulars as regards the number and kinds of trees given away under free permits :—

By whom issued.	Number of permits.	Pyingado.	Pyinma.	Total.
Assistant Conservator of Forests	2	...	34	34
Deputy Commissioner, Shwaygyin	52	433	898	1,331
Total ...	54	433	932	1,365

Free grant.

103. Eight teak trees were granted free to Ponegyee Oo Nandawin, of Mone, under orders of the Chief Commissioner.

WESTERN DIVISION.

Trade permits.

104. Trade permits have been issued for 5,188 trees according to the following statement :—

Satement of trade permits issued during the year 1881-82.

District.	Pyingado.	Pyinma.	In.	Kanyin.	Thingan.	Sha.	Anan.
Forest Ranger, Henzada	1,013	...	1,350	...	...	...	...
Deputy Conservator, Henzada	507	20	325	30	...	...	...
Forest Ranger, Bassein	1,358	189	110	12	12	20	2
Deputy Commissioner, Bassein	215	15	...	...	...	...	...
Total ...	3,093	224	1,785	42	12	20	2

The felling fees amounted to Rs. 1,912-12-0. The tonnage revenue during the year amounted to Rs. 5,364.

Though trade permits have been issued for a larger number of trees this year than in the previous year the revenue is less. This is owing to the large decrease in the building of boats. The timber extracted is smaller.

Free permits.

105. The following is a statement of free permits issued during the year in the Henzada and Bassein districts :—

Statement of free permits issued in the Henzada district during the year 1881-82.

District.	Pyingado.	In.	Sha.	Thitya.	Ingyin.	Kanyin.	Pyinma.
Extra Assistant Commissioner, Henzada	1,900	810	337	980	5	14	71
Deputy Commissioner, do.	300	...	...	...	...	...	...
Total ...	2,200	810	337	980	5	14	71

Statement of free permits issued in the Bassein district during the year 1881-82.

District.	Pyingado.	Pyinma.	In.	Kanyin.	Thingan.	Sha.	Anan.
Deputy Commissioner, Bassein	694	212	...	...	...	...	...
Total ...	694	212	...	...	...	...	...

ARAKAN DIVISION.

Trade permits.

106. Eight hundred and twenty-three rupees have been collected in the Akyab district on permits issued by the Deputy Commissioner for 828 pyingado trees. The returns of the Kyoukpyoo and Sandoway districts are not to hand.

Cutch and other Minor Forest Produce.

PROME.

Cutch.

107. The revenue taken on cutch permits amounted to—

	Rs.
Thayetmyo	11,941
Prome	8,365
Total ..	20,306

against Rs. 48,570 in the previous year, a serious falling-off, especially as the revenue per cauldron had been doubled.

THARRAWADDY.

Cutch.

108. Licenses for 1,222 cutch cauldrons were issued, yielding a revenue of Rs. 24,410. Compared with last year, this shows a falling-off of Rs. 11,740.

Charcoal.

109. In the Tarokemaw forests 111 permits for charcoal were sold, by which Rs. 666 were realized; and 410 dead cutch trees were sold in reserves as fuel for cutch-boilers for Rs. 41.

Bamboos.

110. Nine hundred and thirty-seven thousand eight hundred and seventy-five bamboos were extracted by purchasers from reserves, for which Rs. 2,344-12-4 were paid.

Grazing.

111. For grazing in the fuel reserves during the rains fees amounting to Rs. 132 were received.

Other minor produce.

112. Minor produce sold from reserves realized Rs. 666-9-11, as detailed below :—

	Rs	A.	P.
22,798 viss sha bark	228	0	3
15,886 bundles thatch grass	298	11	8
11 permits for kanyin-oil	52	8	0
2 permits for honey	20	0	0
1 permit for fruits	10	0	0
11,47,500 cheroot-leaves	57	6	0
Total ..	666	9	11

In unreserved forests 15 permits for in-oil and 27 permits for kanyin-oil were sold, realizing Rs. 210.

RANGOON DIVISION.

Minor forest produce.

113. The receipts under this head were as follows :—

	Rs	A.	P.
Charcoal	308	8	0
Bamboo from reserves	1,500	4	0
Betel-vines	41	0	0
Wood-oil	46	0	0
Thatch from reserves	21	4	0
Thin	4	0	0
Sha	5	0	0
Canes	3	0	0

TOUNGOO DIVISION.

Information incomplete.

114. The Toungoo report only states that the income from minor forest produce is Rs. 3,800-8-0 without giving details.

SHWAYGYIN DIVISION.

Charcoal and kanyin-oil.

115. Three hundred and ninety rupees were realized on 78 permits issued for the manufacture of charcoal, Rs. 600 on 150 permits to tap kanyin-oil, and Rs. 430 were obtained as revenue on thitsee-oil tapping.

WESTERN DIVISION.

Report contains no details.

116. Nine hundred and twenty-six rupees and eight annas were realized in the Western division on minor forest produce. The divisional report contains no further details.

Summary.

117. The yield of Government forests for each division, as far as the meagre returns of the Toungoo and Western divisions will permit of compilation, are contained in the following table :—

Yield of Government forests.

Division.	Extracted	Teak.		Reserved trees.	Cutch.	Charcoal.	Wood-oil.	Unreserved trees.	Bamboo.	Sha.	Thatch.	Reserved trees.	
		Logs.	Tons.	Logs.	Trees.		Viss.	Logs.	Number.	Viss.	Hundles.	Sleepers.	Saloo.
Prome.	By Government agency ...	3,553	3,025	...	...	...	...	...	...	...	...	...	...
	By purchasers ...	631	206	478		...	...	...	...	...	...	...	...
	Under trade permits ...	...	...	8,042	60,000	...	...	...	4,300	...	...	...	...
	Under free permits ...	...	...	43,083	...	...	...	...	...	...	...	...	...
	Free	...	...	...	...	...	...	...	...	...	...	...	...
Tharrawaddy.	By Government agency ...	9,423	9,253	...	...	...	...	...	...	...	...	...	...
	By purchasers ...	3,681	1,330	42	1,960	...	660	15	937,875	22,800	15,888*a*	...	...
	Under trade permits ...	...	...	7,905	78,320	33,300	2,520	...	...	...	...	...	...
	Under free permits ...	...	...	27,427	...	...	...	...	...	...	...	...	...
	Free	...	...	...	...	...	...	...	...	...	...	...	...
Rangoon	By Government agency ...	1,184	1,100	17,118	...	...	...	...	...	...	...	...	...
	By purchasers ...	...	...	...	...	...	...	...	...	...	...	...	...
	Under trade permits ...	...	...	9,747	...	30,600	600	...	600,100*b*	...	...	...	...
	Under free permits ...	...	...	2,714	...	...	...	20,541	4,754,339	10,150	46,150	...	1,002,200
	Free	...	...	...	...	...	...	...	...	...	...	...	...
Toungoo.	By Government agency ...	4,240*c*	4,140	481	...	...	...	...	400	...	...	75,787	...
	By purchasers ...	...	...	...	...	...	...	...	...	...	...	...	...
	Under trade permits ...	...	...	824	17,760	3,600	9,750	...	...	...	...	...	...
	Under free permits ...	...	...	18,948	...	...	...	...	...	...	...	...	...
	Free	...	...	...	...	...	...	...	...	...	...	...	...
Shwaygyin ...	By Government agency ...	65	59	206	...	...	...	...	...	...	...	9,254	...
	By purchasers ...	...	...	...	...	...	...	...	...	...	...	...	...
	Under trade permits ...	9	6	783	...	1,400	6,750	...	...	...	...	...	...
	Under free permits ...	...	...	1,365	...	...	...	...	...	...	...	...	...
	Free	8	9	...	...	...	...	...	...	...	...	...	...
Western	By Government agency ...	...	...	1,120	...	...	...	...	...	...	...	...	...
	By purchasers ...	57	28	...	...	...	...	...	...	...	...	...	...
	Under trade permits ...	3	2	5,188	23,400	3,300	...	...	...	...	...	...	...
	Under free permits ...	...	...	5,323	...	...	...	...	...	...	...	...	...
	Free	...	...	...	...	...	...	...	...	...	...	...	...
	Total ...	22,854	19,257	151,454	176,440	72,700	20,280	29,556	6,297,014	32,950	62,038	85,041*d*	1,002,200

118. The following table shows the distribution of revenue and expenditure in the several divisions :—

Financial Results.

Division.	Revenue.			Expenditure.	Surplus.	Deficit.
	Locally collected.	Collected by Agency.	Total.			
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Prome	47,853	1,05,429	1,53,282	90,480	62,802	...
Tharrawaddy ...	62,968	4,74,747	5,37,715	1,69,434	3,68,281	...
Rangoon	1,88,506	60,366	2,48,872	1,73,858	75,014	...
Toungoo	1,50,113	1,20,300	2,70,413	1,97,461	72,952	...
Shwaygyin	37,397	4,610	42,007	53,728	...	11,721
Western	26,498	...	26,498	28,970	...	2,472
Arakan	53	...	53	9,466	...	9,413
Agency	...	51,002	51,002	36,145	14,857	...
Total ...	5,13,388	8,16,454	13,29,842	7,59,542	5,93,906	23,606

B. RIBBENTROP,

Conservator of Forests, Pegu Circle.

a Also honey and wild fruits.
b Rs. 120-4-0 collected on betel, sha, thaloo, &c.
c Also 528 teak sleepers. Rs. 30 received from canes ; Rs. 24 from dammar.
d In addition 22,468 sleepers were received at Agency from Tenasserim circle as well as 38 logs reserved kinds.

APPENDICES.

ANNUAL FORM No. 49 [PRESCRIBED].—*Area of reserved forests for 1881-82.*

Division or range.	Civil district or territory.	Name of forest.	Area on 1st April 1881.		Added during the year	Excluded or transferred to other heads.	Area on 1st March 1882.		No. and date of notification of addition or transfer	Remarks
			Acres.	Equivalent in square miles.	Acres	Acres	Acres.	Equivalent in square miles.		
West Salween.	Salween	Wamoo choung	1,920	3	...	...	1,920	3		
		Sunsweh	8,960	14	...	...	8,960	14		
		Kaheeloo	9,600	15	...	..	9,600	15		
		Mehuanweh	3,840	6	..	...	3,840	6		
		Mehwaing	6,320	13	...	960	7,360	12	No. 20F., dated 29th April 1881.	
		Upper Mehthalouk ...	...	...	8,960	..	8,960	14	No. 80F., dated 23rd September 1881.	
		Lower do. ...	...	...	3,840	...	3,840	6	No. 74F., dated 31st August 1881.	
	Shwaygyin	Beelakatkyee	8,320	13	..	...	8,320	13		
		Onekangyee	8,320	13	...	..	8,320	13		
East Salween.	Amherst	Tagayloung	5,120	8	...	...	5,120	8		
		Kamawkala	5,760	9	...	...	5,760	9		
		East Mehpaleh	38,400	60		...	38,400	60		
		Mehpaleh	12,800	20	...	.	12,800	20		
		Mehkaneh	19,200	30		...	19,200	30		
		Kyoukket	12,160	19		...	12,160	19		
		Mehgala	6,400	10	.	...	6,400	10		
		Winsaw	...	...	6,400	..	6,400	10	No. 21F., dated 14th March 1882.	
		Meethaway	...	..	12,160	...	12,160	19	No 22F., dated 14th March 1882.	
		South Myawadee	...	..	150	...	150	...	No. 18F., dated 9th March 1882.	
Ataran ...		Dalee	7,680	12	...	...	7,680	12		
		Pakabo	20,480	32	.	...	20,480	32		
		Natchoung	5,760	9	.	...	5,760	9		
		Gonegyee	27,520	43	.	...	27,520	43		
		Maco	8,960	14	...	...	8,960	14		
		Mehgwa	12,160	19	...	...	12,160	19		
		Thungannyeenoung ...	5,760	9	...	...	5,760	9		
		Kyoonchoung	10,880	17	...	...	10,880	17		
		Total Tenasserim Circle ...	248,320	388	31,510	960	278,870	436		
Myaydeh range.	Thayetmyo district ...	Tindaw	2,880	5	...	...	2,880	5		
		Sasoowa	4,800	7	...	...	4,800	7		
		Thayetmyo East Yoma ...	80,000	125	1,920	...	81,920	128	No 17F., dated 9th March 1882.	
Kama range	Ditto ...	Saingdo	...	...	1,216	...	1,216	1	No. 39F., dated 20th June 1881.	
		Thabala	...	...	6,080	...	6,080	9	No. 40F., dated 20th June 1881.	
		Mindone Yoma	...	...	166,400	...	166,400	260	No. 83F., dated 29th September 1881.	
		Ngawet	...	...	3,200	...	3,200	5	No. 84F., dated 29th September 1881.	
		Total Thayetmyo district ...	87,680	137	178,816	...	266,496	415		

NAWIN RANGE	Prome district ...	Thitkat and Ayodoung ...	2,944		5	..	...	2,944	5	
		Thayetkoung and Nyoungbindet	4,864		8	...	...	4,864	8	
		Kywehmeedo	2,442		4	...	...	2,442	4	
		Nabehbyoo ...	3,840		6	..	...	3,840	6	
		Shwayloung and Pwehgin ..	13,120		21	...	...	13,120	21	
		Gwaygyo	6,720		10	..	...	6,720	10	
		Choungzouk	9,408		15	...	...	9,408	15	
		Ngaloosan	700		1	.	...	700	1	
		Shwaykyoondaw	256	...		...	...	256	...	
		Prome plantation ...	73	...		...	...	73	...	
		Wapyoo	1,536		2	...	1,536	..	...	
		Meedo	1,920		3	...	1,920	...	...	
		Thitwa	2,500		4	...	2,500	..	...	
		Singoung	3,392		5	...	3,392	..	.	
		Pootkya	2,176		3	...	2,176	..	...	
		Thapangyoung	3,140		5	...	3,140	...	...	No 78F, dated 15th September 1881 — Now excluded as forming part of the Prome East Yoma block of reserves sanctioned in 1881-82.
		Lootthay	640		1	...	640	...		
		Loobone .. .	896		1	...	896	..		
		Banboung	960		2	..	960	...	...	
		Oopawlangyee	2,304		4	...	2,304			
		Oopawlangalay								
		Yaythay								
		Prome East Yoma ...	...	...		97,600	...	97,600	152	No 78F., dated 15th September 1881. — This area includes 43 square miles subject to toungya cultivation, called Karen areas.
		Toneyay	12,224		19	...	...	12,224	19	
		Pouktaw	4,672		7	...	...	4 672	7	
		Sinmeerweh	6,400		10	..	...	6,400	10	
		Total ...	87,127		136	97,600	19,464	165,263	258	
		Total, Prome ...	174,807		273	276,416	19,464	431 759	673	
		Karen areas ...	.	...		27,520	.	27,520	43	
		Total area free of toungya privileges	174,807		273	248,896	19,464	404,239	630	
SHWAYLAY RANGE	Prome district ..	Shwaylay Yoma	33,600		52	...	..	33,600	52	Includes Karen area of 12 square miles
		Dawlay	1,800		3	...	..	1,800	3	
		Padetmyoung	4,500		7	...	...	4,500	7	
		Kyoukkyeetoung	2,600		4	..	...	2,600	4	
		Bwet	2,900		5	...	..	2,900	5	
		Gwaydouk kwin	10,200		16			10,200	16	
		Kyeebyoo	2,200		3	..	..	2,200	3	
		Kadinzouk & Kadinthonezin	3,500		6	..	..	3,500	6	
		Thaboung ...	2,200		3	...	..	2,200	3	
BAWBIN RANGE.	Tharrawaddy district ...	Toungnyo Yoma	88,320		136	...	.	88,320	136	
		Upper Padunbin	600		1	...	...	600	1	
		Lower do.	200	...		...	...	200	...	
		Tapan .. .	4,260		7	...	..	4,260	7	
		Nyanay	5,800		9	...	...	5,800	9	
		Kannee	800		1	...	..	800	1	
		Panangyay	1,300		2	...	...	1,300	2	
		Teungnyo myo	4,780		8	..	.	4,780	8	
		Mlaboo Bawbin	83,200		130	..	.	83 200	130	
		Upper Payagyee	1,000		2	...	..	1,000	2	
		Lower do.	600		1	..	...	600	1	
		Thitcho	1,400		2	...	...	1,400	2	
		Kangyee ...	3,800		6	...	...	3,800	6	
		Gwaydouksan ...	1,300		2	...	...	1,300	2	
		Choungwa	700		1	...	...	700	1	
		Myodwin ..	38	...		...	..	38	...	
		Choungzouk (fuel) ...	3,700		6	...	..	3,700	6	
		Carried forward .	265,298		415	...	..	265,298	415	

ANNUAL FORM No. 49 [PRESCRIBED].—*Area of reserved forests for 1881-82*—concluded.

Division or range	Civil district or territory	Name of forest	Area on 1st April 1881		Added during the year	Excluded or transferred to other heads	Area on 1st March 1882.		No and date of notification of addition or transfer.	Remarks
			Acres	Equivalent in square miles.	Acres	Acres.	Acres.	Equivalent in square miles.		
		Brought forward	265,298	415	.	..	265,298	415		
Gamone range	Tharrawaddy district	Minhla Gamone and Toung	89,600	140	...	...	89,600	140	...	Includes Karen area 47 square miles.
		Toukyan	4,640	7	...	...	4,640	7		
		Thakolan	960	1	..	...	960	1		
		Choungnagone (fuel) ..	300		.	...	300			
		Satpoke (do.) ...	4,700	7	..	...	4,700	7		
		Sitkwin (do.) ..	2,700	4	...	...	2,700	4		
Beelin range	Ditto ...	Mokeka and Kadin Beelin ...	90,900	142	...	...	90,900	142	...	Includes Karen area 30 square miles.
		Kone Beelin	12,800	20	...	...	12,800	20		
		Thonezeh	44,800	70	...	...	44,800	70	...	Includes Karen area 20 square miles.
		Thundawyo (fuel) ...	6,400	10	...	...	6,400	10		
		Total Tharrawaddy ...	523,098	816	...	...	523,098	816		
		Karen areas ...	108,800	170	...	...	108,800	170		
		Total area free of toungya privileges ...	414,298	646	...	...	414,298	646		
		Kyetpyoogan	1,800	3	..	...	1,800	3		
		Kadat	64,000	100	..	...	64,000	100		
		Magayee	12,800	20	...	...	12,800	20		
		Okekan ...	80,000	125	..	...	80,000	125		
		Hlaing Yoma	59,520	93	.	...	59,520	93		
		Upper Zamayee	...	...	145,920	...	145,920	228	No 76F., dated 15th September 1881	Includes Karen area of 68·5 square miles.
		Lower do.	...	...	112,000	...	112,000	175	No. 77F., dated 15th September 1881.	Includes Karen area of 18·5 square miles.
Rangoon ..	Hanthawaddy ..	Total	218,120	341	257,920	...	476,040	744		

			Fuel Reserves								
			Hmawbee .. .	1,700	3	.	.	1,700	3		
			Kyoon . .	8,600	13	..	..	8 600	13		
			Thitpyat	3,100	5	..	.	3,100	5		
			Thabyoo	8,000	13	...	..	8,000	13		
			Total .	21,400	34	...	..	21,400	34		
			Total ..	239,520	375	257,920	.	497,440	778		
			Karen areas ...	8,320	13	68,480	.	76,800	120		
			Total Rangoon .	231,200	362	189,440	..	420 640	658		
			Pyone stream	3,400	5	..	...	3,400	5		
			Yavneh	5,800	9	..	..	5 800	9		
			East Swa	17,280	27	.	.	17,280	27		
			Bonedoung	25,600	40	..	...	25 600	40		
TOUNGOO ...	Toungoo		Kaboung . .	220,800	345	.	...	220,800	345	.	Includes Karen area of 65·5 square miles
			Kyoukmasin .. .	.	..	20,480		20,480	32	No 61F., dated 23rd September 1881.	
			Saing	..	...	64,640	..	64,640	101	No 62F, dated 23rd September 1881.	
			Total Toungoo .	272,880	426	85,120	...	358,000	559		
			Karen areas	41,920	65	...	..	41 920	65 5		
			Total area free of toungya privileges	230,960	360	85,120		316,080	493 5		
KYOUKYEE RANGE ..	Shwaygyin		Bunbyee...	6,400	10	.	.	6,400	10		
KYOONDOUNG RANGE ...	Do		Kyoondoung	960	1	..	...	960	1		
				7,360	11	...	...	7,360	11		
			Total Pegu Circle ...	1,058,695	1,652	593,456	19,464	1,562,617	2,440		
			Karen areas ...	159,040	248	96,006	...	255,040	398		
			GRAND TOTAL, BRITISH BURMA	1,306,945	2,040	554,966	20,424	1,841,487	2,876		

FORM No. 50 [PRESCRIBED].—*Area of plantations in 1881-82.*

DIVISION.	NAME OF PLANTATION.	ON 1ST APRIL 1881.		ADDED DURING 1881-82.		ON 31ST MARCH 1882.		REMARKS.
		Area.	Cost.	Area.	Cost.	Total area.	Total cost.	
		Acs.	Rs.	Acs.	Rs.	Acs.	Rs.	
ATTARAN ...	Thingannyeonoung	16	14,993	.....	.....	16	14,993	
SALWEEN ...	Shwaygoon	5	3,787	.....	.....	5	3,787	
	Kolone island	2	3,539	.....	.....	2	3,539	
	Total Tenasserim Circle ...	23	22,319	.....	.....	23	22,319	
PROME ...	Prome plantation	73	9,023	.....	37	73	9,060	
RANGOON ...	Kyetpyoogan	683	78,062	.....	8	683	78,070	
	Magayee	1,496	1,97,263	15	2,922	1,511	1,30,175	
THARRAWADDY ...	Choungwa	340	34,727	.....	.....	340	34,727	
	Kwaymakaing	144	15,993	.....	60	144	16,053	
	Myodwin	10	887	.....	.....	10	887	
TOUNGOO ...	Kannee	65	1,373	.....	.....	65	1,373	According to accurate survey of 1881-82.
	Pyoonchoung	696	24,469	.....	.....	696	24,469	
	Yaneh	9	168	.....	.....	9	168	
ARAKAN ...	Myouktoung	10	1,010	.....	100	10	1,110	
	Total Pegu Circle ...	3,526	2,92,965	15	3,127	3,541	2,96,092	
	GRAND TOTAL ...	3,549	3,15,284	15	3,127	3,564	3,18,411	

FORM No. 50A.—*Statement of toungya teak-plantations in British Burma for 1881-82.*

Division or range.	Name of reserve.	Year of formation.	Area on 1st April 1881.	Area planted with teak during the year.	Cost up to 1880-81.		Cost during 1881-82.		Total cost.	Average cost per acre up to 1881-82.	Area on 31st March 1882.
					Original cost.	Maintenance.	Original cost.	Maintenance.			
					Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
West Salween	Sinzweh	1860-70	816	60	536 0 0	546 0 0	498 0 0	561 0 0	2,141 0 0	2 7 1	876
	Wampo	1877-78	8	5	6 0 0	6 0 0	28 0 0	9 0 0	49 0 0	3 12 8	13
	Kaheeloo	1879-80	23	.....	47 0 0	44 0 0	.....	11 0 0	102 0 0	4 6 11	23
	Onekangyee	1877-78	25	19	39 0 0	79 0 0	101 0 0	6 0 0	225 0 0	5 1 9	44
	Beelakathyee	1877-78	22	7	21 0 0	.....	31 0 0	6 0 0	58 0 0	2 6 10	22
	Mehnanweh	1877-78	69	34	179 0 0	10 0 0	207 0 0	23 0 0	419 0 0	4 1 1	103
	Mehwaung	1878-79	107	30	216 0 0	13 0 0	186 0 0	96 0 0	513 0 0	3 11 10	137
Ataran	Dalee	1877-78	46	9	.....	13 0 0	45 0 0	14 0 0	72 0 0	1 4 11	55
	Kyoonchoung	1881-82	.....	25	.....	.....	100 0 0*	.....	100 0 0	4 0 0	25
	Total Tenasserim	.....	1,116	189	1,046 0 0	711 0 0	1,196 0 0	725 0 0	3,679 0 0	2 13 1	1,305
Prome	Choungzouk	1879-80	67	.....	304 0 0	453 0 0	.....	156 0 0	913 0 0	.....	.....
		1880-81	132	.....	319 0 0	.....	.....	.....	629 0 0	.....	.....
		1881-82	.....	102	.....	.....	712 0 0	510 3 0	712 0 0	...	.....
	Total Prome	.....	199	102	623 0 0	453 0 0	712 0 0	466 0 0	2,254 0 0	7 8 0	301
Tharrawaddy	Bwet	1875-76	37	.....	.....	.....	.....	.....	.....	.....	... ..
		1876-77	50	.....	.....	.....	.....	.....	.....	.....	.....
		1877-78	44	.....	.....	.....	.....	.....	.....	.....	.....
		1878-79	150	.....	.....	.....	.....	.....	.....	.....	.....
		1880-81	19	.....	.....	.....	.....	26 0 0	.....	.....	.....
		.....	300	.....	1,613 0 0	400 0 0	.....	26 0 0	2,039 0 0	6 12 8	300
	Shwaylay Yoma	1875-76	11	.....	76 0 0	.....	.....	.....	76 0 0	6 14 6	(Failure) 11
	Nyanleh	1878-79	1	.....	404 0 0	28 0 0	.....	20 0 0	.....	.....	.....
		1879-80	8				.....	30 0 0	.....	.....	.....
		1880-81	28				151 0 0		.....	.....	.....
		1881-82	.....	14	.....	.....					
		.....	37	14	404 0 0	28 0 0	151 0 0	50 0 0	633 0 0	12 6 7	51
	Toungnyo Yoma	1875-76	15	.....	135 0 0	59 0 0	.....	.....	194 0 0	12 14 10	(Failure) 15
	Thatcho	1869-70	7	.....	70 0 0	.....	.....	.....	.....	.....	.....
		1870-71	8								
		.....	15	.....	70 0 0	.....	.....	.....	70 0 0	4 10 8	15
	Gwaydouksan	1875-76	11	.....	430 0 0	92 0 0	.....	.....	.....	.....	.....
		1876-77	9				.....	18 0 0	.....	.....	.....
		1878-79	8				103 0 0	31 0 0	.....	.....	.....
		1880-81	15		.....	.....	.....	.....	.....	.....	.....
		1881-82	.....	10	.....	.....	.....	.....	.....	.....	.....
		.....	43	10	492 0 0	92 0 0	103 0 0	49 0 0	664 0 0	12 8 5	53
	Bawbin Kyoukpyoo	1875-76	15	.....	118 0 0	10 0 0	.....	.....	128 0 0	8 8 6	(Failure) 15

* An estimated sum of Rs. 40, has still to be paid on account of this plantation.

FORM No. 50A.—*Statement of toungya teak-plantations in British Burma for 1881-82.*—concluded.

Division or range.	Name of reserve.	Year of formation.	Area on 1st April 1881.	Area planted with teak during the year.	Cost up to 1880-81. Original cost.	Cost up to 1880-81. Maintenance.	Cost during 1881-82. Original cost.	Cost during 1881-82. Maintenance.	Total cost.	Average cost per acre up to 1881-82.	Area on 31st March 1882.
	Bawbin Choungwa	1869-70	17	.....	1,479 0 0	449 0 0	.....	.....	.....	.....	.....
		1873-74	4	.....							
		1874-75	39	.....							
		1876-77	31	.....							
		1877-78	25	.....							
		1878-79	25	.....							
		1879-80	18	.....							
		1880-81	28	.....				45 0 0			.....
		1881-82	.....	28	.....	.....	337 0 0	55 0 0	.....	.....	.....
			178	28	1,479 0 0	449 0 0	337 0 0	100 0 0	2,365 0 0	11 7 8	206
	Kangyee	1878-79	54	.....	1,487 0 0	.....	.....	163 0 0	.....	.....	In addition to this there are some 30 acres of plantations outside the reserve made in 1865: cost unknown.
		1879-80	65	14					.....	.....	
		1880-81	58			370 0 0	90 0 0	116 0 0	.....	.....	
		1881-82	.....	.....					.....		
			178	14	1,487 0 0	370 0 0	90 0 0	279 0 0	2,236 0 0	11 9 6	192
	Minhla Myoung	1873-74	22	.....	1,184 0 0	843 0 0	.....	.....	.....	.....	.....
		1874-75	40								
		1875-76	57								
			119	.....	1,184 0 0	843 0 0	.....	.....	2,027 0 0	17 0 6	119
	Minhla Mokeka	1873-74	23	.....	1,293 0 0	932 0 0	.....	.....	.....	.....	.....
		1874-75	41								
		1875-76	86								
		1880-81	38	.....	354 0 0	.....	.....	82 0 0	.....	.....	.....
		1881-82	.....	131	.....	.....	874 0 0	.....	.....	.....	.....
			188	131	1,647 0 0	932 0 0	874 0 0	82 0 0	3,535 0 0	11 1 3	319
	Mokeka Beelin	1869-70	10	.....	6,796 0 0	2,772 0 0	.....	.....	.....	.....	Toungya taxes for 1881-82 not yet paid.
		1870-71	19								
		1871-72	27								
		1873-74	160								
		1874-75	157								
		1875-76	29								
		1876-77	155								
		1877-78	96								
		1878-79	102					5 0 0			
		1879-80	86					160 0 0			
		1880-81	136					269 0 0			
		1881-82	.....	259	.....	.....	1,813 0 0	.....	.....	.....	
			970	259	6,796 0 0	2,772 0 0	1,813 0 0	434 0 0	11,815 0 0	9 9 9	1,229
	Kadin Beelin	1875-76	4	.....	23 0 0	17 0 0	.....	.....	40 0 0	10 0 0	4
	Thonezeh Koon Beelin	1875-76	19	.....	1,216 0 0	411 0 0	.....	.....	.....	.....	Toungya-tax for 1881-82 not yet paid .....
		1877-78	38								
		1878-79	34								
		1879-80	41					77 0 0			
		1880-81	25				17 0 0	133 0 0			
		1881-82	.....	77	.....	.....	299 0 0	.....	.....	.....	
			227	77	1,216 0 0	411 0 0	316 0 0	210 0 0	2,153 0 0	9 1 3	304
	Total Tharrawaddy	.....	2,300	533	16,668 0 0	6,383 0 0	3,684 0 0	1,230 0 0	27,965 0 0	9 13 11	2,833
	Total Pegu Circle	.....	2,499	635	17,291 0 0	6,836 0 0	4,396 0 0	1,696 0 0	30,219 0 0	.....	3,134
	GRAND TOTAL, BRITISH BURMA	.....	3,615	824	18,337 0 0	7,547 0 0	5,592 0 0	2,422 0 0	33,898 0 0	.....	4,439

FORM No. 51.—*Area of forest tracts protected from fire during the dry season of 1882 (to accompany Report for 1881-82).*

DIVISION	FOREST TRACTS	UP TO 15TH JUNE 1881.		DURING DRY SEASON OF 1882.				TOTAL COST UP TO JUNE 1882.	YEAR IN WHICH PROTECTION COMMENCED	REMARKS
		Area actually protected.	Total cost	Area attempted to be protected	Failures	Actually protected.	Amount expended.			
		Acs.	Rs.	Acs.	Acs.	Acs	Rs.	Rs.		
WEST SALWEEN	Sinzweh	8,460	3,396	8,960	30	8,930	599	3,995	1871	
	Wamoo	640	39	1,920	...	1,920	6	45	1871	Burnt all but 240 acres in 1879
	Kaheeloo	880	100	1,280	...	1,280	21	121	1878	
	Mehwaing	6,320	149	7,360	...	7,360	7	156	1877	The reduction here is due to 1¼ square miles being thrown out of the reserve.
	Mehnanweh	3,840	9	3,840	...	3,840	1	10	1878	
	Onekangyee	4,800	510	4,160	...	4,160	37	547	1877	
	Beelakatkyee	...		3,000	...	3,000	...			
EAST SALWEEN	Mehpaleh West	...	...	19,200	1,280	17,920	578	578	1881	
ATARAN	Dalee	30	128	800	...	800	72	200	1878	
	Kyoonchoung	9,070	368	9,600	...	9,600	98	446	1880	
	Total	36,040	4,689	60,120	1,310	56,810	1,409	6,098	...	

	Rs.
Charges in previous years	1,857
Do. 1879-80	1,299
Do. 1880-81	1,533
Do. 1881-82	1,409
Total	6,098

FORM No. 51.—*Area of forest tract protected from fire during the dry season of (1882 to accompany Report for 1881-82)*—concluded.

DIVISION	FOREST TRACT.	UP TO 15TH JUNE 1881.		DURING DRY SEASON OF 1882.				TOTAL COST UP TO JUNE 1882.	YEAR IN WHICH PROTECTION COMMENCED.	REMARKS
		Area actually protected	Total cost.	Area attempted to be protected.	Failures.	Actually protected.	Amount expended.			
			Rs.				Rs.	Rs.		
THARRAWDDY	Mokeka-Beelin reserve	12,150	12,307*	20,980	..	20,980	1,154	13,461	1873	*Rs. 90 omitted last year, now included.
	Bawbin	614	3,157	814	12	802	309	3,466	1809	
	Myodwin	40	500	40	...	40	41	541	1869	
	Bwet	300	3,952	2,886	28	2,858	1,220	5,172	1877	
	Kangyee	3,567	7,140	3,801	...	3,801	1,051	8,191	1877	
	Nyanleh	5,415	9,770	5,340	180	5,160	1,531	11,301	1877	
	Thonezeh	2,180	290	2,180	...	2,180	120	410	1876	
	Minhla and Myoung	87	423	119	20	99	150	573	1876	
	Minhla and Mokeka	149	547	3,000	60	2,940	944	791	1876	
	Gwaydoukan	26	170	233	...	233	91	261	1876	
RANGOON	Magayee plantation	1,455	18,038	3,139	295	2,844	1,656	19,696	1872	
	Do reserve	1,694								
	Kyetpyoogan plantation	683	2,843	683	...	683	849	3,692	1868	
PROME	Teak plantation	35	6,313	7,540	...	75	37	.	1857	
	Gwaycho reserve	3,358								
	Choungzouk			3,362	...	3,362	604	6,954	1879	
TOUNGOO	Pyoonchoung	3,435	4,116	3,440	1	3,439	443	4,559	1877	
	Yaneh	5,660	2,132	5,760	...	5,760	371	2,503		
ARAKAN	Myouktoung plantation	10	710	10	...	10	75	785	1874	Only now brought to account.
	Total Pegu Circle	40,618	72,406	55,862	596	55,266	9,948	82,356	..	
	Add Tenasserim Circle	36,040	4,689	60,120	1,310	58,810	1,409	6,098	...	
	GRAND TOTAL, BRITISH BURMA	76,858	77,097	115,982	1,906	114,076	11,357	88,454	.	

Charged in previous year	82,933
Do. 1879-80	2,633
Do. 1880-81	2,043
Do. 1881-82	2,948
Total	81,556

Form No. 52 [Prescribed].—*Prosecutions for breaches of forest rules for the year 1881-82.*

Forest division and civil district.	Cases pending from 1880-81.	New cases of the year.					Total cases.	Disposed of during the year.						Cases pending at close of year.
		Injury to forest by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year.		Convictions.		Acquittals.		Total.		
								Cases.	Persons.	Cases	Persons.	Cases.	Persons.	
West Salween	.....	.....	1	...	..	1	1	1	1	...	1	1	2	...
Ataran	.....	.....	1	...	...	1	1	...	...	1	1	1	1	...
Kado	.....	.....	...	...	46	46	46	29	33	15	18	44	49	2
South Tenasserim	.....	.....	4	...	..	4	4	3	3	2	2	4	4	...
Total Tenasserim Circle	.....	.....	6	...	46	52	52	32	35	18	22	50	56	2
Tharrawaddy division, central district	.....	.....	3	...	1	4	4	4	23	...	...	4	23	...
Prome civil district	.....	.....	7	1	1	9	9	7	18	2	4	9	22	...
Total	.....	.....	10	1	2	13	13	11	41	2	4	13	44	...
Prome district—														
Padoung township	.....	.....	1	...	...	1	1	1	1	...	...	1	1	...
Mahathaman	.....	.....	3	...	..	3	3	3	8	...	...	3	8	...
Thayetmyo district—														
Myaydeh township	.....	.....	1	...	...	1	1	...	...	1	1	1	1	...
Thayetmyo	.....	.....	...	...	1	1	1	...	...	1	1	1	1	...
Ditto	.....	.....	1	...	..	1	1	...	...	1	6	1	6	..
Total	.....	.....	6	...	1	7	7	4	9	3	8	7	17	.
Shwaygyin district	.....	.....	4	...	1	5	5	5	5	...	..	5	5	.
Western division—														
Henzada district	.....	.....	13	...	.	13	13	10	10	3	3	13	13	.
Rangoon division	.....	.....	3	...	2	5	5	3	5	1	1	4	6	1
Total Pegu Circle	.....	.....	36	1	6	43	43	33	63	9	16	42	85	1
Total, British Burma	.....	.....	42	1	52	95	95	65	104	27	38	92	141	3

FORM No. 18 [PRESCRIBED].—*Summary of revenue of the different divisions for 1881-82.*

Budget heads.	Agency division.	Rangoon division.	Tharrawaddy division.	Prome division.	Western division.	Toungoo division.	Shwaygyin division.	Arakan division.	Total Pegu circle.	Salween division.	Kado revenue division.	Total Tenasserim circle.	Grand Total British Burma.
RECEIPTS.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—													
a Timber	7,99,964 8 10	1,54,997 0 0	550 3 1	7,501 9 3	2,220 6 3	1,22,495 6 2	15,037 12 0	.....	11,12,876 13 7	4,42,334 9 1	.....	4,42,334 9 1*	15,55,211 6 8
b Firewood and charcoal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
c Bamboos	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
d Sandal-wood	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
e Grass and other minor produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	36 4 0	.....	36 4 0	36 4 0
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—													
a Timber	177 4 0	31,412 4 0	31,604 10 3	19,000 11 2	7,224 15 11	2,057 0 2	2,967 8 4	.....	94,504 5 10	21,020 5 4	3,647 10 0	24,676 15 4	1,19,181 5 2
b Firewood and charcoal	.....	308 8 0	707 0 0	.....	146 8 0	.....	300 0 0	.....	1,552 0 0	.....	.....	.....	1,552 0 0
c Bamboos	.....	1,500 4 0	2,344 12 4	10 12 0	.....	1 0 0	.....	.....	3,856 12 4	.....	.....	.....	3,856 12 4
d Grazing and fodder grass	.....	.....	192 0 0	.....	.....	.....	.....	.....	192 0 0	.....	.....	.....	192 0 0
e Other minor produce	.....	120 4 0	25,316 9 11	20,706 0 0	780 0 0	3,830 8 0	1,080 0 0	.....	51,383 5 11	711 0 0	.....	711 0 0	52,094 5 11
III.—CONFISCATED, DRIFT AND WAIF WOOD	14,701 6 6	10 0 0	1,222 0 6	571 14 9	15,471 14 0	11,396 12 10	17,981 11 3	.....	61,495 11 10	851 7 0	96,012 4 0	96,863 11 0	1,58,359 6 10
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—													
a Duty on foreign timber and other forest produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,32,877 0 0	3,32,877 0 0	3,32,877 0 0
b Revenue from shared and private forests	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
V.—MISCELLANEOUS—													
a Fines and forfeitures	.....	.....	75 0 0	14 2 3	.....	180 0 0	.....	.....	269 2 3	403 0 0	.....	403 0 0	672 2 3
b Refunds	166 5 5	157 11 0	.....	19 13 8	63 13 6	.....	.....	53 8 0	461 3 7	2 6 0	.....	2 6 0	463 9 7
c Other sources	1,334 8 6	.....	950 0 0	338 6 4	520 0 0	162 0 0	.....	.....	3,310 14 10	276 8 0	3,780 0 0	4,056 8 0	7,367 6 10
Total receipts	8,10,454 1 3	1,88,006 15 0	63,966 4 1	47,853 5 5	26,427 0 8	1,20,112 11 2	37,366 15 7	53 8 0	13,39,842 6 2	4,65,644 7 5	4,36,316 14 0	9,01,961 5 5	22,31,803 11 7

FORM No. 52 [PRESCRIBED].—*Prosecutions for breaches of forest rules for the year 1881-82.*

FOREST DIVISION AND CIVIL DISTRICT.	Cases pending from 1880-81.	NEW CASES OF THE YEAR.					Total cases.	DISPOSED OF DURING THE YEAR.						Cases pending at close of year.
								CONVICTIONS.		ACQUITTALS.		TOTAL.		
		Injury to forest by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year.		Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
West Salween	.....	.....	1	...	...	1	1	1	1	...	1	1	2	...
Ataran	.....	.....	1	...	...	1	1	...	...	1	1	1	1	...
Kado	.....	.....	...	...	46	46	46	29	32	15	18	44	49	2
South Tenasserim	.....	.....	4	...	...	4	4	2	2	2	2	4	4	...
Total Tenasserim Circle	.....	.....	6	...	46	52	52	32	35	18	22	50	56	2
Tharrawaddy division, central district	.....	.....	3	...	1	4	4	4	22	...	...	4	22	...
Prome civil district	.....	.....	7	1	1	9	9	7	18	2	4	9	22	...
Total	.....	.....	10	1	2	13	13	11	40	2	4	13	44	...
Prome district—														
Padoung township	.....	.....	1	...	...	1	1	1	1	...	...	1	1	...
Mahathaman	.....	.....	3	...	...	3	3	3	8	...	...	3	8	...
Thayetmyo district—														
Myaydeh township	.....	.....	1	...	...	1	1	...	...	1	1	1	1	...
Thayetmyo	.....	.....	...	...	1	1	1	...	...	...	1	1	1	...
Ditto	.....	.....	1	...	...	1	1	...	...	1	6	1	6	...
Total	.....	.....	6	...	1	7	7	4	9	3	8	7	17	...
Shwaygyin district	.....	.....	4	...	1	5	5	5	5	...	...	5	5	...
Western division—														
Henzada district	.....	.....	13	...	...	13	13	10	10	3	3	13	13	...
Rangoon division	.....	.....	3	...	2	5	5	3	5	1	1	4	6	1
Total Pegu Circle	.....	.....	36	1	6	43	43	33	60	9	16	42	85	1
TOTAL, BRITISH BURMA	.....	.....	42	1	52	95	95	65	104	27	38	92	141	3

A.—CONSERVANCY AND WORKS.

I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY:—																
a Timber	52,829 3 7	1,14,403 14 6	83,599 13 2	44,590 6 0	5,614 9 0	1,42,563 7 6	27,845 5 9	.....	4,71,066 11 6	2,27,122 13 2	.....	2,27,122 13 2	6,98,189 8 8			
b Firewood and charcoal	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
c Bamboos	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
d Sandal-wood	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
e Grass and other minor produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
II.—TIMBER AND OTHER PRODUCE FROM THE FORESTS BY CONSUMERS OR PURCHASERS	240 13 4	1,308 6 0	1,955 9 9	2,002 3 8	1,717 8 0	12 8 0	383 0 7	771 7 9	7,700 8 8	.....	.....	.....	7,700 8 8			
III.—CONFISCATED, DRIFT AND WAIF WOOD	1,203 2 8	2,412 4 0	326 9 0	32 4 0	3,037 1 7	3,837 13 11	10,515 15 3	.....	22,355 2 5	828 8 0	43,832 6 0	44,660 14 0	67,016 0 5			
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT:—																
a Duty on foreign timber and other forest produce	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
b Revenue from shared and private forests	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHAREHOLDERS IN FORESTS MANAGED BY GOVERNMENT	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
VI.—LIVE-STOCK, STORES, TOOLS AND PLANT:—																
a Purchase of cattle	11,850 0 0	.....	.....	.....	3,000 0 0	.....	.....	.....	14,850 0 0	2,400 0 0	.....	2,400 0 0	17,250 0 0			
b Feed and keep of cattle	6,929 11 9	1,578 12 6	1,427 0 1	411 14 4	972 7 7	2,029 7 1	507 11 3	475 3 3	14,422 3 10	1,693 2 0	.....	1,693 2 0	16,115 5 10			
c Stores, tools and plant	12,543 10 7	161 0 0	226 1 0	.....	184 8 0	338 2 5	3 0 0	.....	13,456 6 0	1,710 12 0	823 4 7	2,534 0 7	15,990 6 7			
VII.—COMMUNICATIONS AND BUILDINGS:—																
a Roads and bridges	14 6 0	256 11 11	607 10 4	6 0 0	.....	.....	.....	.....	784 12 3	.....	321 10 0	321 10 0	1,106 6 3			
b Buildings	1,042 15 0	242 11 8	1,070 14 1	532 11 3	.....	280 3 9	1,165 5 0	.....	4,469 12 10	3,681 0 4	3 0 0	3,684 0 4	13,153 13 2			
c Other works	212 12 0	.....	882 0 10	.....	.....	7 0 0	.....	.....	1,101 12 10	1,871 19 8	45 0 0	1,416 12 6	2,518 9 6			
VIII.—DEMARCATION, IMPROVEMENT, AND EXTENSION OF FORESTS:—																
a Demarcation	318 3 6	1,835 14 0	874 9 0	267 12 0	.....	2,807 13 11	.....	.....	6,104 4 5	6,730 13 5	.....	6,730 13 5	12,835 1 10			
b Compensation for land and rights	.....	65 0 0	.....	1,502 8 0	445 0 0	.....	200 0 0	.....	2,212 8 0	309 12 0	.....	309 12 0	2,642 4 0			
c Surveys and working-plans	4 0 0	52 0 0	8,017 6 11	.....	.....	133 14 5	.....	5 12 0	8,213 1 4	672 14 0	.....	672 14 0	8,885 15 4			
d Plantations	11 2 6	2,920 8 5	9,421 3 4	1,237 14 0	.....	933 13 6	.....	25 0 0	14,563 9 11	5,185 10 7	.....	5,185 10 7	19,747 4 6			
e Protection from fire	.....	2,679 9 8	5,097 2 9	607 14 0	.....	833 8 6	.....	75 0 0	9,226 2 6	1,597 13 0	.....	1,597 13 0	10,823 15 6			
f Other works	.....	.....	1,078 0 4	10 4 0	.....	87 8 0	.....	.....	1,125 5 4	4,872 9 8	.....	4,872 9 8	5,998 15 0			

FORM No. 53 [PRESCRIBED].—*Summary of expenditure of the different divisions for 1881-82.*—concluded.

Budget heads.	Agency division.	Rangoon division.	Thayrawaddy division.	Prome division.	Western division.	Toungoo division.	Shwaygyin division.	Arakan division.	Total Pegu circle.	Salween division.	Kado revenue station division.	Total Tenasserim circle.	Total British Burma.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
IX.—MISCELLANEOUS—													
(a) Refunds ...	92 2 0	.....	.....	.....	.....	.....	.....	.....	92 2 0	81 0 0	.....	81 0 0	173 2 0
(b) Law charges ...	.....	.....	.....	2 8 0	.....	.....	17 0 0	.....	19 8 0	157 7 0	.....	157 7 0	176 15 0
(c) Other charges ...	109 10 0	1,414 15 3	613 13 0	.....	2,322 10 0	3,846 10 4	1 0 0	20 0 0	8,538 10 7	111 0 0	10 0 0	121 0 0	8,649 10 7
Total A.—Conservancy and works ...	67,500 12 5	1,20,423 11 1	1,14,547 6 7	51,370 2 10	18,223 12 2	1,57,666 15 6	40,248 5 10	1,372 7 0	6,00,353 10 5	2,63,584 15 10	45,035 4 7	3,08,620 4 5	9,08,973 14 10
B.—ESTABLISHMENTS.													
I.—SALARIES—													
(a) Conservators ...	13,490 5 0	.....	.....	.....	.....	.....	.....	.....	13,490 5 0	13,435 7 7	.....	13,435 7 7	26,925 12 7
(b) Superior officers ...	500 0 0	7,210 5 8	9,500 0 0	7,300 5 0	5,806 12 4	6,211 4 7	3,000 0 0	5,250 0 0	47,667 11 7	20,242 12 8	1,260 0 0	27,493 12 8	75,160 8 3
(c) Subordinate forest and depôt establishments ...	7,082 13 4	4,398 3 9	8,420 9 6	5,050 9 6	2,479 4 6	4,830 5 5	3,408 0 0	.....	35,750 14 0	6,331 7 0	5,003 8 0	12,334 15 0	48,084 13 0
(d) Office establishments ...	15,738 0 8	2,738 10 7	3,675 8 10	2,050 13 9	1,511 15 3	1,802 0	844 0 2	.....	28,357 15 3	8,200 10 8	5,010 0 0	13,210 10 8	41,568 9 6
(e) Deputation and special allowances ...	116 8 5	.....	.....	.....	.....	.....	.....	.....	116 8 5	2,954 13 6	.....	2,954 13 6	3,071 2 11
II.—TRAVELLING ALLOWANCES—													
(a) Conservators ...	2,018 12 0	.....	.....	.....	.....	.....	.....	.....	2,018 12 0	1,999 0 0	.....	1,999 0 0	4,017 12 0
(b) Superior officers ...	120 0 0	3,922 12 0	4,224 4 0	1,140 8 0	2,490 10 9	2,875 4 4	2,983 2 2	1,704 8 0	19,181 1 3	8,500 0 0	.....	8,500 0 0	27,681 1 3
(c) Subordinate forest and depôt establishments ...	342 1 5	134 8 0	343 0 6	8 4 0	17 2 0	.....	.....	.....	840 5 11	.....	.....	.....	840 5 11
(d) Office establishments ...	73 14 6	416 7 8	437 9 11	48 1 4	150 5 2	52 0 1	151 15 7	.....	1,335 9 3	.....	.....	.....	1,335 9 3
III.—CONTINGENCIES—													
(a) Stationery ...	358 4 0	6 0 0	.....	.....	.....	4 4 0	.....	.....	368 8 0	.....	.....	.....	368 8 0
(b) Carriage of tents and records ...	64 12 0	111 10 6	.....	.....	10 8 0	12 0 0	64 0 0	69 0 0	314 14 6	.....	.....	.....	314 14 6
(c) Rents, rates, and taxes ...	2,765 9 5	600 0 0	.....	83 15 2	.....	21 3 6	.....	330 0 0	3,800 12 1	240 12 0	16 6 0	256 2 0	4,056 14 1
(d) Pay of police guards ...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
(e) Official postage ...	208 6 6	69 7 0	87 8 6	51 6 9	40 0 6	55 1 0	20 2 0	27 12 6	516 12 0	99 14 0	.....	99 14 0	716 10 0
(f) Sundries ...	3,120 0 0	481 7 6	355 12 3	679 15 0	78 14 0	100 6 3	102 14 0	434 0 0	5,419 14 9	1,739 1 0	44 0 0	1,783 1 0	7,202 15 9
Total B.—Establishments ...	46,009 7 3	19,798 8 8	26,914 5 6	16,408 14 6	12,605 14 6	18,025 5 2	10,564 7 11	8,568 13 0	1,59,186 13 0	69,743 14 0	12,313 14 0	82,059 12 0	2,41,246 9 0
GRAND TOTAL OF EXPENDITURE ...	1,33,509 4 8	1,40,222 3 9	1,41,461 12 1	67,860 1 4	30,829 10 8	1,75,692 4 8	50,812 13 9	9,941 4 6	7,59,542 7 5	3,33,328 13 10	57,351 2 7	3,90,680 0 5	11,50,222 7 10

ANNUAL FORM No. 54 [PRESCRIBED].—*Account current for the year 1881-82.*

Dr. *Cr.*

	Tenasserim Circle.	Pegu Circle.	Total British Burma.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
To opening balance	206 15 8	6,342 12 6	6,551 12 2
To revenue as per form No. 53	9,01,961 5 5	13,29,842 6 2	22,31,803 11 7
Service funds—			
Civil fund, ordinary, Bengal	52 8 0	62 0 3	114 8 3
Military funds, Madras	177 14 3	.....	177 14 3
Uncovenanted Service Fund, Bengal	1,918 15 0	1,457 5 0	2,476 4 0
Forest cash remittances (local)—			
Forest cheques paid	3,97,827 1 6	7,87,317 4 7	11,85,144 6 1
Inter-divisional transfers	.....	42,862 15 4	42,862 15 4
Deposits	.....	600 0 0	600 0 0
Advances recoverable	57,915 9 1	3,56,520 4 5	4,14,435 13 6
Suspense	2 6 0	214 8 0	216 14 0
Account current (other Governments)—			
Government of North-Western Provinces and Oudh...	.....	485 2 6	485 2 6
Government of India	677 6 9	.....	677 6 9
Inter-departmental transfers—			
Military Department, Bengal	96 0 0	45 0 0	141 0 0
Ditto, Madras	184 6 6	325 7 8	509 14 2
Public Works Department, Rangoon and Sittang Valley State Railway	.....	6,609 14 0	6,609 14 0
Civil Department, Jail	730 14 7	.....	730 14 7
Do. Mathematical Instrument Department ...	.....	126 11 0	126 11 0
Do. Survey Department	.....	589 6 5	589 6 5
Marine Department	.....	10,894 9 4	10,894 9 4
Total ...	13,60,853 6 9	25,44,295 11 2	39,05,149 1 11

	Tenasserim Circle.	Total Pegu Circle.	Total British Burma.
	Rs. A. P.	Rs. A. P.	Rs. A. P.
By expenditure as per annual form No. 53	3,90,680 0 5	7,59,542 7 5	11,50,222 7 10
Forest cash remittances (local)—			
Remittances to treasuries	6,28,364 4 6	6,91,297 4 4	17,19,661 8 10
Inter-divisional transfers	.....	42,817 8 7	42,817 8 7
Deposits	.....	1,200 0 0	1,200 0 0
Advances recoverable	67,717 4 9	3,76,304 12 5	4,44,022 1 2
Suspense	2 6 0	175 14 0	178 4 0
Account current (other Governments)—			
Government of India	10,465 12 3	.....	10,465 12 3
Government of North-Western Provinces and Oudh...	.....	350 0 0	350 0 0
Inter-departmental transfers—			
Public Works Department (other branches) ...	576 9 11	15,615 2 11	16,191 12 10
Ditto ditto Pegu, Irrawaddy, and Sittang Valley State Railway	.....	3,65,312 5 11	3,65,312 5 11
Military Department, Bengal	8,365 10 10	.....	8,365 10 10
Ditto ditto, Madras	12,407 12 2	.....	12,407 12 2
Ditto ditto, Bombay	25,563 11 7	.....	25,563 11 7
Civil Department, Jail	14,697 0 0	69,593 13 3	84,290 13 3
Rewards for passing examination	250 0 0	250 0 0	500 0 0
Mathematical Instrument Department, Bengal ...	.....	1 10 0	1 10 0
Telegraph Department	1,520 8 2	749 14 10	2,270 7 0
Marine Department	.....	11,613 5 9	11,613 5 9
Cinchona plantation charges	.....	3,139 15 8	3,139 15 8
Miscellaneous...	.....	160 0 0	160 0 0
Closing balance ...	242 6 2	6,171 8 1	6,413 14 3
Total ...	13,60,853 6 9	25,44,295 11 2	39,05,149 1 11

ANNUAL FORM No. 55.—[PRESCRIBED].—*Statement of outstandings and liabilities on Account of contractors and disbursers for 1881-82.*

DIVISION	DEPARTMENT DEBTOR			DEPARTMENT CREDITOR.			BALANCE DUE		REMARKS
	At commencement of year	Recoveries in cash and value of supplies and work done during the year	At close of year	At commencement of year	Payments made during year	At close of year	To department (outstandings)	By department (liabilities)	
	Rs. A P	Rs A P	Rs A P	Rs A P	Rs A P	Rs A P	Rs A P	Rs A P	
Salween	. .	55,615 9 1	55,615 9 1	5 806 10 0	65,417 4 9	71,223 14 9	15,608 5 8	. . .	
Kado revenue station	...	2,300 0 0	2,300 0 0	.	2,300 0 0	2,300 0 0	....	..	
Total Tenasserim Circle ..		57,915 9 1	57,915 9 1	5,806 10 0	67,717 4 9	73,523 14 9	15,608 5 8	. .	
Government Timber Depôt and Agency Office ..	..	55,846 15 9	55,846 15 9	2,188 14 2	79,340 6 3	81,524 4 5	25,677 4 8	. .	
Rangoon	. . .	52,737 10 4	52,737 10 4	15,353 1 0	38,004 7 6	53,357 8 6	1,849 14 2	1,230 0 0	
Tharrawaddy	...	1,17,934 8 8	1,17,934 8 8	7,132 8 2	1,30,243 1 11	1,37,375 10 1	19 441 1 5	...	
Prome	...	35,153 8 3	35,153 8 3	534 8 0	43,984 14 3	44,519 6 3	9,365 14 0	.	
Western	.. .	15,141 14 10	15,141 14 10	9,750 0 2	16,100 10 0	25,850 10 2	10,708 11 4	.. .	
Toungoo	..	75,988 7 7	75,988 7 7	5,031 4 0	62,881 4 6	67,912 8 6	1,450 6 11	9,526 6 0	
Shwaygyin		3,657 3 0	3,657 3 0	100 3 0	5,710 0 0	5,810 3 0	2,153 0 0	.	
Arakan	. .....	60 0 0	60 0 0	20 0 0	40 0 0	60 0 0	...	... ..	
Total Pegu Circle	.....	3,56,520 4 5	3,56,520 4 5	40,105 6 6	3,76,304 12 5	4,16,410 2 11	70,846 4 6	10,756 6 0	
TOTAL, BRITISH BURMA ...	...	4,14,435 13 6	4,14 435 13 6	45,912 0 6	4,44,022 1 2	4,89,934 1 8	86,254 10 2	10,756 6 0	

ANNUAL FORM No. 56.—[PRESCRIBED].—*Statement of outstandings on account of revenue during 1881-82.*

Division.	Particulars.	Outstandings at commencement of year.	Value of sales and other revenue during year.	Total	Amount realized during year.	Balance due to the department at end of year.	Remarks
		Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs A. P.	
SALWHEN	Timber and other produce, &c.	....	5,01,071 6 7	5,01,071 6 7	4,65,644 7 5	35,426 15 2	
KADO REVENUE STATION	Do. do.	.....	4,36,316 14 0	4,36,316 14 0	4,36,316 14 0	.....	
	Total Tenasserim Circle ...	.. ...	9,37,388 4 7	9,37,388 4 7	9,01,961 5 5	35,426 15 2	From public departments Rs A. P. 31,897 9 2 From private purchasers 529 6 0
G. T. DEPOT AND AGENCY OFFICE	Timber and other produce. &c.	9,194 0 0	8,28,310 12 0	8,37,504 12 0	8,16,454 1 3	21,050 10 9	
RANGOON	Do do.	.....	1,88,505 15 0	1,88,505 15 0	1,88,505 15 0	....	
THARRAWADDY ...	Do. do.	.....	62,968 4 1	62,968 4 1	62,968 4 1	....	
PROME	Do. do.	.....	47,853 5 5	47,853 5 5	47,853 5 5	.....	
WESTERN	Do do.	719 12 0	26,279 5 8	26,999 1 8	26,999 1 8	.....	
TOUNGOO	Do. do	.....	1,50,112 11 2	1,50,112 11 2	1,50,112 11 2	.	
SHWAYGYIN	Do. do.	.....	37,583 7 7	37,583 7 7	37,396 15 7	186 8 0	
ARAKAN	Refunds	.....	53 8 0	53 8 0	53 8 0	....	* Realization as per form Rs. A. P. No 53 .. .. 13,29,842 6 2 Written off under Government sanction ... 501 8 0 Total .. 13,30,343 14 2
	Total Pegu Circle ...	9,913 12 0	13,41,667 4 11	13,51,581 0 11	*13,30,343 14 2	†21,237 2 9	† From public departments 4,629 10 9 From private purchasers 16,607 8 0 Total ... 21,237 2 9
	GRAND TOTAL, BRITISH BURMA ...	9,913 12 0	22,79,055 9 6	22,88,969 5 6	22,32,305 3 7	56,664 1 11	

ANNUAL FORM No. 57.— PRESCRIBED].—FOREST DEPARTMENT, BRITISH BURMA, TENASSERIM AND PEGU CIRCLES.—*Financial results of the year 1881-82.*

	Division	Timber and other produce removed from the forests by Government agency		Other revenue		Formation, protection, and improvement of forests.	Total		Remarks
		Receipts	Charges.	Receipts	Charges	Charges	Receipts	Charges	
		Rs.	Rs	Rs	Rs	Rs	Rs	Rs	
Tenasserim	Salween	77,191	36,518	4,085	7,117	10,761	81,276	54,396	
	East Salween	2,77,119	1,16,518	5,538	6,096	14,120	2,82,657	1,36,734	
	West Salween	20,855	22,515	2 034	4,138	10,109	22,889	36,762	
	Ataran	41,111	43,613	6,712	4,196	6,886	47,823	54,695	
	South Tenasserim	26,947	34,586	3,804	3,429	7,956	30 751	45,971	
	Kado	96,012	49,865	3,40,553	5,961	6,196	4,36.565	61,922	
	Total Tenasserim	5,39,215	3,03,615	3,62,736	30 837	56,028	9,01,961	3,90,680	
Pegu	Tharrawaddy	4,76,579	1,36,265	61,136	9 370	33,799	5,37,715	1,69,434	
	Rangoon	2,15,373	1,51,475	33,499	7,414	14,969	2,48 872	1,73,858	
	Prome	1,13,592	74,606	39,690	6 094	9 780	1,53.282	90,480	
	Toungoo	2,64,163	1,80,493	6,230	5,118	11,850	2,70 413	1,97,461	
	Western	17,698	23,238	8,605	5,742		26,498	28,970	
	Shwaygyin	37,630	46,433	4,377	5,095	200	42,007	53,728	
	Arakan			53	771	8 695	53	9,466	
	Agency	51,002	36,145				51,002	36,145	
	Total, Pegu	11,76,052	6,40,645	1,53,790	39,604	79,293	13,29,843	7,59,542	
	GRAND TOTAL, BRITISH BURMA	17,15,267	9,44,460	5,16,516	70,441	1,35,321	22,31,803	11,50,222	

FORM No. 59 [SUGGESTED].—*Outturn of timber and other produce cut and collected by Government agency during the year 1881-82.*

Division	PRODUCE CUT AND COLLECTED. How obtained.	Description	Number or quantity.	Cubic feet.	Remarks
	Worked out.	PEGU CIRCLE			
THARRA-WADDY ..	Dawlay forests ...	Teak logs ...	202	12,898	
	Shwaylay do. ...	ditto ...	1,054	60,060	
	Toungnyo do. ...	ditto ...	1,772	66,828	
	Minboo do. ...	ditto ...	800	43,804	
	Boben do. ...	ditto ...	1,518	75,902	
	Tounggamone forests ...	ditto ...	740	30,064	
	Minhla do.	ditto ...	708	37,642	
	Mokeka do. ...	ditto ...	160	8,084	
	Kadin Beelin do. ...	ditto ...	903	48,657	
	Kone do. ...	ditto ...	300	14,700	
	Thoneoh do. ...	ditto ...	958	46,942	
	South Tharrawaddy forests..	Waif logs, teak ...	77	3,773	
		Total ...	9,500	466,450	
PROME ...	Nawin forests ...	Teak logs, teak ...	1,804	88,396	
	Mindone do. ...	ditto ...	194	9,700	
	Thehgone do. ...	ditto ...	8	392	
	Booleh do. ...	ditto ...	1,020	40,080	
	Padeh do. ...	ditto ...	527	2,080	
	Prome do. ...	Drift and waif teak ...	61	3,050	
		Waif in ...	4	160	
		Total ...	3,618	154,473	
WESTERN ...	Teak cuttings ...	Teak cuttings ...	57	1,425	
		Do. drift ...	616	25,872	
		Do. sea drift ...	94	5,298	
		Pyingado ...	40	1 200	
		Kathit ...	397	15,111	
		Kanyin ...	73	2,909	
		Thingan ...	13	547	
		Toungthayet ...	2	90	
		Kyoonbone ...	16	560	
		Thitto ...	76	3,241	
		Kokokay ...	29	1,007	
		Thabyay ...	4	143	
		In ...	506	20,214	
		Drift pyingado ...	1	30	
		„ pyinma ...	2	80	
		„ in ...	3	123	
		Total ...	1,869	77,000	
SHWAY-GYIN ...	....	Teak logs ...	65	2,955	
		Do drift ...	4,812	235,788	
		Kanyin ...	206	21,012	
		Pyingado sleepers ...	6,254	9 981	
		Various do ...	3,000	4,500	
		Other kinds drift ...	300	15,900	
		Total ..	14,736	290,406	
AGENCY ...	....	Teak drift ...	350	17,012	
		Other kinds drift ...	51	1,717	
		Padouk ...	38	1,205	
		Sleepers pyingado ...	22,468	38,701	
		Total ...	22,907	58,695	
RANGOON	.....	Teak logs ...	1,184	58,016	
		Pyingado ...	16,315	500,470	
		Thitka ..	709	34,035	
		Pyinma ..	4	160	
		Teak drift ...	220	9,044	
		Thitka do. ...	58	2,610	
		Kanyin do. ...	104	6,076	
		Pyinma do. ...	42	1,680	
		In do. ...	70	3,163	
		Various do. ...	103	4,120	
		Do., confiscated ...	172	6,880	
		Total ..	19,140	628,654	
TOUNGOO ...		Teak logs ...	4,240	207,760	
		Pyinma ...	194	7,720	
		Thitka ...	288	11,520	
		Sleepers, teak ...	528	792	
		Do, various ...	75,787	113,680	
		Drift teak ..	2,304	115,200	
		Total ...	83,340	456,672	
		Total Timber ...	155,134	2,127,130	
		Abstract of the circle.			
		Teak logs ...	18,622	883 006	
		Ditto, drift and waif ..	8,534	415,877	
		Ditto, sleepers ...	528	792	
		Other kind logs ...	18 063	622,604	
		ditto, drift	1,078	43,409	
		ditto, sleepers	107,509	161,262	
		Pyingado do. ...	...	...	
		GRAND TOTAL ...	155,134	2,127,130	

FORM No. 60.—*Statement of timber and other produce received from forests in sale depôts during the year 1881-82.*

Division	Depôt	PRODUCE RECEIVED. Description.	Number or quantity.	Cubic feet.	Remarks.
		TENASSERIM CIRCLE.			
SALWEEN	Battery point and Kado depot.	Teak pieces and crooks ...	4,365	47,930	Lower Salween forest.
		Ditto ditto	345	3,190	Pandaw forest.
		Teak logs, foreign	4	500	Bought for conversion.
		Thitka logs ...	29	757	
		Pyingado logs . ..	321	5,205	
		Do. sleepers (large) ...	33	114	
		Do do. (small) .	2,553	3,830	
		Total Salween ...	7,050	61,721	
EAST SALWEEN ...	Ditto ..	Teak logs and pieces	9,626	412,087	Thoungyin forest
		Do. crooks	4,652	52,550	Hlaingbweh forest.
		Do. logs	29	812	Houngdraw forest.
		Thitka logs	1,340	27,500	
		Pyinma do.	58	1,740	
		Thitpyoo do. .	270	13,809	
		Padouk do. ...	217	6,686	
		Total East Salween	16,192	586,274	
WEST SALWEEN	Ditto	Teak logs .	3	150	Upper Salween forest
		Teak pieces	3	45	Yoonzalen forest.
		Do. crooks	3,862	54,070	Doomdamee forest.
		Pyingado logs . .	92	1,840	
		Thitpyoo	170	3,107	
		Thitkado	40	1,809	
		Total West Salween	4,170	61,081	
ATARAN	Ditto .	Teak logs, pieces, and crooks ..	1,748	20,226	Ataran forest
		Thitka logs	942	62,538	
		Thitpyoo do.	5	115	
		Padouk do.	377	14,102	
		Pyinma do.	289	9,060	
		Petwoon do	12	240	
		Thingan do	25	876	
		Sit do	14	323	
		Ingyin do. ..	13	288	
		Padouk planks		61	
		Total Ataran	3,125	118,959	
SOUTH TENASSERIM	Tavoy	Teak ..	96	785	Drift.
		Pyingado sleepers (large) ...	2,437	6,539	
		Ditto (small) ...	16,047	27,008	
		Ditto scantlings	1,070	1,070	
		Padouk planks	11	111	
	Mergui . .	Teak logs	25	650	Drift.
		Total South Tenasserim ...	21,626	38,193	
KADO .	Kado and Battery point ...	Teak logs	5,549	230,416	Drift.
		GRAND TOTAL	58,612	10,01,624	

FORM No. 60.—*Statement of timber and other produce received from forests in sale depôts during the year 1881-82*—continued.

Division	Depôt	Produce received. Description.	Number or quantity.	Cubic feet.	Remarks
		Abstract of the Divisions.			
		Teak logs and pieces	30,247	830,490	
		Thitka logs	2,311	100,885	
		Thitkado	40	1,809	
		Thitpyoo	415	17,001	
		Pyinma	347	10,820	
		Pyingado	413	7,135	
		Padouk	594	20,878	
		Petwoon	12	240	
		Thingan	25	876	
		Sit	14	323	
		Ingyin	13	288	
		Pyingado sleepers (large) ...	2,470	9,073	
		Ditto (small) ...	20,000	30,808	
		Pyingado scantlings	1,070	1,070	
		Padouk planks	11	172	
		Total Timber ...	58,012	1,091,024	
		PEGU CIRCLE.			
THARRAWADDY	Government timber depôt, Rangoon.	Teak logs—			
		Yathits	994	26,838	
		Loozars	5,824	201,054	
		Doogyees	2,002	109,266	
		Yard and mast pieces	4	332	
		Squares	5	105	
		Total ...	8,889	427,705	
RANGOON	Ditto ...	Teak logs—			
		Yathits	118	3,186	
		Loozas	160	8,160	
		Doogyees	217	11,501	
		Yard and mast pieces	13	1,139	
		Extracted on the half-profit principle	339	14,016	
		Thitka logs	800	40,800	
		Pyinma do.	4	100	
		Total ...	1,651	79,802	
PROME	Ditto ...	Teak logs—			
		Yathits	404	10,908	
		Loozas	1,094	55,794	
		Doogyees	1,762	93,386	
		Yard and mast pieces	8	724	
		Total ...	3,268	160,812	
TOUNGOO	Ditto ...	Teak logs—			
		Yathits	37	999	
		Loozas	1,122	57,222	
		Doogyees	725	38,425	
		Yard and mast pieces	1	63	
		Extracted on the half-profit principle	1,066	73,304	
		Thitka logs	285	14,535	
		Pyinma do.	97	3,880	
		Total ...	3,933	188,448	
SHWAYGYIN	Ditto ...	Teak logs—			
		Yathits	16	432	
		Loozas	87	1,887	
		Doogyees	12	636	
		Kanyin logs	206	21,012	
		Total ...	271	23,967	

FORM No. 60.—*Statement of timber and other produce received from forests in sale depôts during the year 1881-82*—concluded.

Division.	Depôt.	Produce received. Description.	Number or quantity.	Cubic feet.	Remarks.
AGENCY	Government timber depôt, Rangoon.	Padouk logs	38	1,265	
		Sleepers, pyinkado	22,468	33,701	
		Total ...	22,506	34,966	
WESTERN	Bassein ...	Kathit logs	367	15,111	
		Kanyin do.	73	2,809	
		Thingan do.	13	547	
		Toungthayet logs	2	90	
		Kyoonbo logs	16	561	
		Thetto do.	76	3,241	
		Kokobay logs	23	1,007	
		Thabyay do.	4	143	
		In do.	506	20,215	
		Total ...	1,080	43,724	
		Drift.			
RANGOON	Government timber depôt, Rangoon.	Teak logs— Yathits	42	1,134	
		Loozas	127	6,477	
		Doogyees	25	1,325	
		Short pieces...	26	650	
		Thitka logs	27	967	
		Pyinma do.	42	1,080	
		In do.	70	1,975	
		Kanyin do.	164	19,725	
		Various other kinds	275	6,875	
		Total ...	807	40,708	
AGENCY ...	Ditto ...	Teak logs— Yathits	27	729	
		Loozas	199	10,149	
		Doogyees	90	4,770	
		Short pieces.	11	275	
		Squares	20	780	
		Yard and mast pieces ...	3	309	
		Thitka logs	6	306	
		Thingan do.	11	561	
		Banbway logs	7	175	
		Various other kinds	27	675	
		Total ...	401	18,729	
WESTERN ...	Bassein ...	Teak logs— Sea drift	94	5,268	
		Total ...	94	5,268	
		GRAND TOTAL LOGS ...	42,900	1,024,180	
		Abstract of the divisions. Teak logs and pieces	17,284	832,273	
		Thitka logs	1,118	56,508	
		Pyinma	143	5,720	
		Kanyin	443	43,546	
		In	585	22,190	
		Thingan	24	1,108	
		Banbway	7	175	
		Padouk	38	1,265	
		Kathit	367	15,111	
		Toungthayet	2	90	
		Kyoonbo	16	561	
		Thitto	76	3,241	
		Kokehay	23	1,007	
		Thabyay	4	143	
		Various	302	7,550	
		Sleepers, pyingado	22,468	33,701	
		Total ...	42,900	1,024,180	
		GRAND TOTAL, BRITISH BURMA ...	101,512	2,115,813	

FORM No. 61.—*Sales of timber and other produce cut and collected by Government agency during the year 1881 82.*

Division	Depot or locality	Produce sold: Description.	Number or quantity	Cubic feet	Remarks
		Tenasserim Circle			
		Sold from depots			
Salween	Kado and Battery Point	Teak pieces and crooks	4 365	47 016	Lower Salween
		Do crooks	345	3 190	Pandaw
		Do logs	11	861	Foreign drift
		Kado drift logs	15	1 460	
		Pyingado do	58	1 160	
		Thitka do	29	737	
		Pyingado sleepers, large	413	1 112	
		Ditto do, small	3 081	4 621	
		Ditto scantlings		819	
		Teak planks		19 085	
		Do squares	126	5 461	
		Shingles	21 300	450	
		Total	31 763	87 232	
East Salween	Ditto	Teak logs	7,831	321 846	Thoungyin
		Do crooks	4 652	52 650	Hlaingbweh
		Do logs	29	812	Houndraw
		Thitka do	1,310	97 500	
		Pyinma do	58	1 740	
		Padouk do	120	5,122	
		Thitpyoo do	261	13 503	
		Teak log ends and slabs	14		
		Total	14 308	493 268	
West Salween	Ditto	Teak logs	3	150	Upper Salween
		Do pieces	3	45	Yoonzaleen
		Do crooks	3,862	54 070	Dom lamee
		Thitpyoo logs	150	2 550	
		Total	4,018	56 815	
Ataran	Ditto	Teak logs, pieces, and crooks	1 748	26 226	Ataran.
		Thitka logs	923	61 253	
		Pyinma do	49	980	
		Padouk do	301	12 792	
		Petwoon do	6	120	
		Padouk planks		41	
		Do log-ends	99		
		Total	3 186	101 412	
South Tenasserim	Tavoy	Teak logs	16	735	Drift
		Pyingado sleepers large	2 181	7 571	
		Ditto do, small	18 337	27 504	
		Ditto scantlings		50	
		Padouk planks		111	
	Mergui	Teak logs	25	650	Drift
		Total	20 579	37 142	
Kado	Kado and Battery Point	Teak logs	2 647	110 134	Drift
		Grand Total	76 501	885 998	
		Sold locally			
East Salween	Kawkareik	Thitka pieces	1	9	
Ataran	Ataran	Do boat hulls	2	38	
		Thingan do	2	305	
Kado	Seashore	Teak logs	332	13,620	Drift
		Grand Total	337	13,972	
		Abstract of the Divisions			
		Sold from depots			
		Teak logs	25 592	620 705	
		Thitka do	2 292	159 600	
		Pyinma do	107	2 720	
		Padouk do	481	17 914	
		Petwoon do	6	120	
		Thitpyoo do	411	16 053	
		Pyingado do	58	1 160	
		Do sleepers small	21 418	32 125	
		Do do large	2 594	9 005	
		Teak squares	126	5,461	
		Do shingles	23 300	450	
		Do planks, boards, and scantlings		19 085	
		Pyingado scantlings		1 388	
		Padouk planks		152	
		Do log ends	99		
		Teak log-ends and slabs	14		
		Total Timber	76 501	885 998	
		Sold locally			
		Teak logs	332	13 620	
		Thitka piece	1	9	
		Do boat hulls	2	38	
		Thingan do.	2	305	
		Total	337	13,972	

FORM No. 61.—*Sales of timber and other produce collected by Government agency during the year 1881-82.*

DIVISION.	DEPÔT OR LOCALITY.	PRODUCE SOLD. Description.	Number or quantity.	Cubic feet.	REMARKS.
		PEGU CIRCLE.			
		Sold from depôt.			
AGENCY ...	Government timber depot, Ahlone.	Teak logs	15,316	757,510	
		Woods of other kinds—			
		Thitka and thitkado logs ...	574	29,325	
		Padouk logs	38	1,205	
		Kanyin do.	110	11,230	
		Pyingado sleepers	22,468	33,701	
		Teak logs, drift	277	11,789	
		Other kinds drift—			
		Kanyin logs	54	6,801	
		Confiscated jungle—			
		Wood of various kinds ...	291	11,247	
		Total ...	39,128	862,808	
WESTERN ...	Bassein depôt ...	Woods of other kinds—			
		Kathit	110	4,306	
		Teak logs, drift	94	5,268	
		Total ...	204	9,574	
		Total Part I ...	39,332	872,442	
PROME ...	.....	Sold locally—			
		Teak logs	142	7,085	
		Do. scantlings	23	140	
		Thitya logs	26	409	
		Teak do. drift	60	1,690	
		In do. do.	4	100	
		Total ...	255	9,574	
SHWAYGYIN ...	Shwaygyin ...	Sleepers, other kinds—			
	Koonchoung ...	Pyingado sleepers	4,000	6,000	
	Pyoontaza ...	Do. do.	2,028	3,042	
	Myitkyo ...	Various kinds	3,226	4,839	
	Theinchoung ...	Teak logs, drift	5	155	
		Do. confiscated... ...	67	7,565	
		Do. do.	23	1,700	
		Total ...	9,349	23,301	
THARRAWADDY ...	South Tharrawaddy.	Teak logs	10	958	
		Do. waif	77	3,459	
		Total ...	96	4,417	
WESTERN ...	...	Teak logs	57	1,710	
		Pyingado logs	40	1,200	
		Teak logs, drift	362	15,590	
		Other kinds various drift ...	6	150	
		Total ...	465	18,560	
RANGOON ...	Pegu	Teak logs	537	16,313	
	Hlaing ...	Do. drift	1	49	
		Pyingado sleeper-pieces ...	16,042	494,496	
		Total ...	16,580	511,058	
TOUNGOO ...	Railway line ...	Teak logs	428	20,544	
		Pyinma logs...	26	780	
		Teak logs, drift	261	12,907	
		Sleepers, various	76,315	114,472	
		Total ...	77,030	148,063	
		Total Part II ...	103,575	715,008	
		GRAND TOTAL, PARTS I & II ...	142,907	1,587,445	
		Abstract of divisions sold from depôts.			
		Teak logs	15,316	757,510	
		Thitka and thitkado logs ...	574	29,325	
		Padouk	38	1,205	
		Kanyin	110	11,230	
		Kashit	110	4,300	
		Pyingado sleepers	22,468	33,701	
		Teak logs, drift...	371	17,057	
		Kanyin, do.	54	6,801	
		Confiscated jungle wood, various ...	291	11,247	
		Total ...	39,332	872,442	
		Sold locally.			
		Teak logs	963	46,810	
		Do. scantlings...	23	140	
		Thitya logs	26	409	
		Pyinma do.	26	780	
		Pyingado logs	40	1,200	
		Ditto sleepers	6,028	9,042	
		Ditto sleeper-pieces	16,042	494,496	
		Sleepers, various	70,541	110,311	
		Teak logs, drift	856	42,415	
		Other kinds various (four eng) ...	10	310	
		Total ...	103,575	715,008	
		GRAND TOTAL ...	142,907	1,587,445	

ANNUAL FORM No. 62 [PRESCRIBED].—*Account of timber and other produce cut or collected by Government agency and brought to sale depôts or sold locally during the year 1881-82.*

Particulars.	Number or quantity.	Cubic feet.	TOTAL OF EACH HEAD. Number or quantity.	TOTAL OF EACH HEAD. Cubic ft.
TIMBER.				
Balance at the commencement of the year.				
Salween. Teak logs (including 85 drift) and one foreign log	130	7,186		
Salween. Padouk logs	133	2,800		
Salween. Thitya do.	5	175		
Salween. Pyinkado do.	58	831		
Salween. Pinleh kanazo ...	1	22		
Salween. Hardwood sleepers, large	2,452	8,414		
Salween. Ditto, small	216	284		
Salween. Pyingado scantlings ...	..	318		
Salween. Padouk planks ...	...	60		
Kado. Drift timber	2,440	73,200		
Kado. Duty do.	23,408	1,211,490		
Kado. Foreign woods, other kinds	34	1,734	28,911	1,306,488
Received from the forests in depôts.				
Teak logs	24,698	600,070		
Thitka logs	2,311	160,895		
Thitkado	40	1,800		
Thitpyoo	445	17,091		
Pyinma	347	10,820		
Pyingado	419	7,185		
Padouk	504	20,878		
Petwoon	12	240		
Thingan..	25	876		
Sit	14	323		
Ingyin	13	288		
Pyingado sleepers, large ...	2,470	8,073		
Do. do., small ...	20,000	20,808		
Do. scantlings ...		1,070		
Padouk planks	...	172		
No. of logs entered during 1881-82, foreign teak ...	25,077	6,464,500		
Foreign woods, other kinds ...	27	1,431		
British teak	1,523	77,150		
Do. woods, other kinds ...	278	14,900		
Number of drift logs brought into depots	5,549	230,416	154,436	7,049,305
Received from the forests and sold locally.				
Thitka piece	1	9		
Thingan boat-hulls ...	2	305		
Thitka ditto ..	2	38		
Sea drift teak logs ...	332	13,620	337	13,972
Received by conversion in depôts.				
Teak squares	120	6,805		
Do. planks, boards, and scantlings	...	20,905		
Do. shingles	80,300	1,399		
Pyingado sleepers, large ...	264	917		
Ditto, small ...	1,119	1,678		
Thitya sleepers ...	8	27		
Pyingado scantlings ..	...	840		
Pinleh kanazo scantlings .	...	11		
Log-ends and slabs ...	113	...	81,030	32,572
Received by transfer from Kado Revenue division.				
Drift logs	180	6,600	180	6,600
Total Tenasserim ...	2,05,753	9,008,907		
Agency division.				
Teak logs	1,832	306,980		
Do. sleepers	79	105		
Do. logs, drift	112	6,506	7,023	313,681
Prome division.				
Teak logs	52	2,444		
Do. scantlings	28	56		
Thitya logs	26	1,170	106	3,670
Western division.				
Teak logs, drift	4	108		
Kathit logs	28	696	32	804
Shwaygyin division.				
Teak logs	14	658		
Do. drift	668	30,753		
Thitka logs, drift... ...	65	2,925		
Pyinma ditto	2	90		
Thayet ditto	1	45		
Banbway ditto	1	45		
Lehza ditto	1	45		
Dwanee ditto	1	45	753	34,006

Particulars.	Number or quantity.	Cubic feet.	TOTAL OF EACH HEAD. Number or quantity.	TOTAL OF EACH HEAD. Cubic ft.
TIMBER.				
Removed by purchasers from depôts.				
Teak logs, including 35 drift...	22,945	510,631		
Thitka logs	2,202	159,000		
Pyinma do.	107	2,720		
Padouk do.	481	17,914		
Petwoon do. ...	6	120		
Thitpyoo do.	414	10,058		
Pyingado do.	58	1,100		
Do. sleepers, small ..	21,418	82,125		
Do. do., large ..	2,504	9,005		
Teak squares	126	5,461		
Do. shingles ...	23,300	450		
Do. planks, boards, and scantlings . .	...	19,085		
Pyingado scantlings ...	...	1,488		
Padouk planks ...	...	152		
Log-ends and slabs ...	113	...		
Drift logs, teak ...	2,047	1,10,154	76,501	885,998
Sold locally.				
Thitka piece	1	9		
Thitka boat-hulls	2	38		
Thingan do. ...	2	305		
Sea drift teak logs ...	332	13,620	337	13,972
Number of logs cleared up to date on payment of duty from depots.				
Foreign teak	107,901	7,121,466		
Do. woods, other kinds	40	2,300		
British teak	1,207	63,350		
Do. woods, other kinds ...	274	14,522	109,488	7,201,638
Number of drift logs delivered to claimants on payment of salvage .	3,396	122,479	3,396	122,479
Converted in depôts.				
Thoungyin logs, teak ..	415	18,745		
Foreign logs, teak.. ..	5	749		
Upper Salween logs, teak ...	3	140		
Drift logs	189	9,100		
Pyinkado logs	303	0,506		
Thitya logs	5	175		
Pyinch kanazo	1	22		
Pyingado sleepers, large ...	320	1,111	1,331	30,608
Lost or written off as useless.				
Loss in butting of teak squares	...	1,344	...	1,344
Used by the Department.				
Teak planks, boards, and scantlings .. .	.	1,890		
Teak shingles	57,000	949		
Pyingado scantlings ...	...	320		
Used by the department ..	20	400		
Transferred to Salween division depot	130	6,600	57,150	10,158
Balance at the close of the year.				
Salween division. Pyingado sleepers, large	86	298		
Salween division. Pyingado sleepers, small	547	735		
Salween division. Thitya sleepers ..	8	27		
Salween division. Pinleh kanazo scantlings ..	...	11		
East Salween division. Thoungyin logs	1,410	74,421		
East Salween division. Padouk logs ...	97	1,564		
East Salween division. Thitpyoo logs ...	5	306		
West Salween division. Thitkado logs ...	40	1,809		
West Salween division. Thitpyoo do. .	20	617		
West Salween division. Pyingado do. ..	15	300		
Ataran division. Padouk logs ...	140	4,200		
Ataran division. Petwoon do. ...	6	120		
Ataran division. Pyinma do. ...	40	8,100		
Ataran division. Thingan do. ...	25	876		
Ataran division. Thitka do. ..	10	1,285		
Ataran division. Thitpyoo do. .	5	115		
Ataran division. Soot do. ...	1	323		
Ataran division. Ingyin do. ..	1	288		
Ataran division. Padouk planks ...	...	8		
South Tenasserim division. Pyingado and gangaw sleepers, large ...	2,186	7,590		
South Tenasserim division. Pyingado scantlings... ...	...	501		

ANNUAL FORM No. 62 [PRESCRIBED].—*Account of timber and other produce cut or collected by Government agency and brought to sale depôts or sold locally during the year 1881-82.*

Particulars	Number or quantity	Cubic feet.	TOTAL OF EACH HEAD: Number or quantity	TOTAL OF EACH HEAD: Cubic feet.
TIMBER.				
Tharrawaddy division				
Teak logs	2 025	95,175		
Do scantling	44	84	2,067	95 259
Total balance			0,981	448,130
Received from forests in depots				
Teak logs	16,020	799,079		
Thitka do	1,085	54,858		
Pyinma do	101	4 040		
Kanyin do	208	26 406		
In do	506	19 188		
Thingan do	24	1,108		
Padouk do	38	1,265		
kathit do	367	15 111		
Toungthayet logs	2	90		
Kyoonbo do	16	561		
Thitto do	76	3 241		
Kokehy do	24	1,007		
Thabyay do	4	143		
Teak logs, drift	604	33,200		
Thitka ditto	33	1 650		
Pyinma ditto	42	1 680		
In ditto	70	3,002		
Kanyin ditto	175	17,150		
Banbway ditto	7	175		
Various	302	7,550		
Other kinds of sleepers	22,408	33 701		
			42,000	1,024,189
Received from forest, sold locally				
Teak logs	983	46 810		
Do scantlings	23	140		
Thitya logs ..	26	499		
Pyingado	40	1,200		
Pyinma	26	780		
Various sleepers	85 569	128,354		
Pyingado sleeper-pieces	16,042	494,496		
Drift teak	856	42 415		
Do. other kinds	10	310		
			103,575	715,003
Drift collected in the various divisions and disposed of locally				
Teak	7,214	362 800		
Other kinds	1 017	41,078		
			8,251	403,008
Received in transfer from depots				
Teak logs	16 020	799,079		
Other kinds	1,092	58,104		
Teak logs, drift	220	11 000		
Other kinds, do	587	23,480		
			16,819	892,017
To short delivery at depôt				
Teak logs despatched.	17,057			
Do do received	16,020	—437		
Teak logs, drift, despatched	222			
Teak logs, drift, received	220	—2		
Other kinds, drift, despatched	018			
Other kinds, drift, received	587	—31		
		—470		
Other kinds of logs, despatched	1,349			
Other kinds of logs received	1,392	+43	—427	—21,470
Total, Pegu ...	...		183 953	3,501,767

Particulars.	Number or quantity.	Cubic feet.	TOTAL OF EACH HEAD: Number or quantity	TOTAL OF EACH HEAD: Cubic feet
TIMBER				
Balance at the close of the year—concluded.				
Kado division: Drift timber	1,787	61,041		
Kado division: Foreign teak	10,564	554,690		
Kado division: Do woods, other kinds	15	885		
Kado division: British teak	256	12,800		
Kado division: Do woods other kinds	4	78		
			17,641	796,800
Total Tenasserim	...	...	205,753	9,008,997
Removed by purchasers from depot.				
Teak logs	15,716	757,510		
Thitka and thitkado logs	574	29,325		
Padouk logs	38	1,265		
kanyin do.	110	11,230		
kathit do ..	110	4,306		
Pyingado sleepers ..	22,468	33,701		
Teak logs, drift . ..	371	17,057		
kanyin do .	54	6,801		
Confiscated various ..	201	11,247		
Sold locally.			39,332	872,442
Teak logs . .	983	46,810		
Do scantlings . .	23	140		
Theya logs	26	499		
Pyinma do .	26	780		
Pyingado do . .	40	1,200		
Do sleepers .	6,028	9,042		
Do do pieces	16,042	494,496		
Various sleepers	79,541	119,311		
Teak logs, drift	856	42,415		
Other kinds, drift ...	10	310		
Used by Department			103,575	715,003
Teak logs . ..	1	50		
Do drift ..	7	350		
Written off or lost and unaccounted for.			..	400
Teak logs	19	950		
Do scantlings .	5	30		
Do. drift ..	60	3,000		
Returned to claimants.			84	3,980
Teak logs, drift ...	7,101	709,276		
Other kinds of logs, drift	318	17,436		
Transferred to depôts			7,419	386,712
Teak logs .	17,057	888,166		
Other kinds	1,349	53,980		
Teak logs, drift . .	222	11,100		
Other kinds, do	618	25,720		
Closing balance			19,246	9,28 046
Agency—				
Teak logs ...	8,136	399,204		
Do sleepers ...	79	118		
Thitka ...	512	32,818		
Pyinma .. .	100	3,790		
Kanyin ..	96	4,270		
Drift teak logs	56	2,793		
Do various . ..	125	4,852		
			9,104	457,854
Western—				
Kathit	285	11,447		
Kanyin	73	2,809		
Thingan ..	13	547		
Toungthayet ..	2	90		
Kyeiuboo ...	10	561		
Thitioo ..	76	3,241		
kokekay . .	23	1,007		
Thabyay .	4	143		
In .	506	20,215		
Teak logs, drift	42	1,040		
			1,040	42,001
Tharrawaddy—				
Teak logs	.	..		
			2,465	120,785
Rangoon—				
Pyinkado	.	.		
			277	5,974
Toungoo—				
Teak logs . .	136	6,800		
Pyinma .. .	70	2,800		
Thitka	41	2 050		
Teak drift .	10	500		
			257	12,150
Shwaygyin—				
Teak logs .	13	603		
Drift teak logs .	813	42,811		
Do thitka	76	3,800		
Do kanyin .	16	1,180		
Do pyinma	96	3,810		
Do thitpyoo	9	405		
Do thitto ..	8	360		
Do thitkado	2	90		
Do pyingado	2	90		
Do various .	111	5,261	1,146	58,520
Total .	...	.	183,953	3,504,767

FORM No. 62.—*Abstract for British Burma.*

Particulars.	Tenasserim. Pieces. Number.	Tenasserim. Pieces. Cubic feet.	Pegu. Pieces. Number.	Pegu. Pieces. Cubic feet.	British Burma. Pieces. Number.	British Burma. Pieces. Cubic feet.
To balance in hand at commencement of year ...	29,911	1,306,488	9,981	448,120	38,892	1,754,608
Received from the forests in depôt.						
Teak logs	24,698	600,050	16,620	799,073	41,318	1,399,123
Do., drift	..	..	664	33,200	664	33,200
Other kinds	4,214	220,345	2,510	127,008	6,724	347,353
Do., drift	..	...	638	31,207	638	31,207
Pyingado sleepers, large	2,470	8,673	...	...	2,470	8,673
Do. do., small	20,600	30,898	22,468	33,701	43,068	64,599
Do. scantlings	..	1,070	...	...	...	1,070
Padouk planks	...	172	...	...	...	172
Total ...	51,982	861,908	42,900	1,024,189	94,882	1,885,397
Received from the forests and sold locally.						
Teak logs	...	...	983	46,810	983	46,810
Do. scantlings	...	...	23	140	23	140
Other kinds logs	...	...	92	2,479	92	2,479
Ditto pieces	1	9	16,042	494,496	16,043	494,505
Sleepers, teak	...	...	528	792	528	792
Do., other kinds	...	..	85,041	127,561	85,041	127,561
Drift logs, teak	332	13,620	656	42,415	1,188	56,035
Do., other kinds	...	...	10	310	10	310
Boat-hulls	4	343	...	..	4	343
Total ...	337	13,972	103,575	715,003	103,912	728,975
Received by conversion in depots.						
Teak squares	126	6,805	...	...	126	6,805
Do. planks boards, and scantlings ...	..	20,905	...	...		20,905
Do. shingles	80,300	1,399	...	..	80,300	1,399
Pyingado sleepers, large	264	917	...	..	264	917
Do. do., small	1,119	1,678	...	..	1,119	1,678
Thitya sleepers	8	27	..	...	8	27
Other kinds scantling		841	...	...		841
Log-ends and slabs	113	...	...	...	113	...
Total ...	81,930	32,572	...	...	81,930	32,572

Particulars.	Tenasserim. Pieces. Number.	Tenasserim. Pieces. Cubic feet.	Pegu. Pieces. Number.	Pegu. Pieces. Cubic feet.	British Burma. Pieces. Number.	British Burma. Pieces. Cubic feet.
Removed by purchasers from depots.						
Teak logs (including 35 drift)	22,945	510,631	15,316	757,510	38,261	1,268,141
Other kinds	3,358	197,567	832	46,126	4,190	243,693
Pyingado sleepers, small	21,418	32,125	22,468	33,701	43,886	65,826
Do. do., large	2,594	9,005	..	...	2,594	9,005
Teak squares	126	5,461	..	...	126	5,461
Do. shingles	23,300	450	...	...	23,300	450
Do. planks, boards, and scantlings ...	...	19,085	...	...	...	19,085
Pyingado scantlings	...	1,388	...	...	...	1,388
Padouk planks	...	152	...	...	...	152
Log-ends and slabs	113	...	...	...	113	...
Drift logs, teak	2,647	110,134	371	17,057	3,018	127,191
Do. do., other kinds	-	...	345	18,048	345	18,048
Total ...	76,501	885,998	39,332	872,442	115,833	1,758,440
Sold locally.						
Teak logs	...	...	963	46,810	963	46,810
Do. scantlings	...	...	23	140	23	140
Other kinds logs	..	...	92	2,479	92	2,479
Do. do. pieces	1	9	16,042	494,496	16,043	494,505
Sleepers, teak	...	...	528	792	528	792
Do. other kinds	...	...	85,041	127,561	85,041	127,561
Drift logs teak	332	13,620	656	42,415	1,188	56,035
Do. do., other kinds	...	...	10	310	10	310
Boat-hulls, ditto	4	343	...	...	4	343
Total ...	337	13,972	103,575	715,003	103,912	728,975
Transfers to Rangoon depot.						
Teak logs	...	...	17,057	638,166	17,057	638,166
Other kinds	...	...	1,349	53,960	1,349	53,960
Drift teak logs	...	...	222	11,100	222	11,100
Do other kinds	...	...	618	25,720	618	25,720
Total ...	.	...	19,246	928,946	19,246	928,946
Number of logs cleared up to date on payment of duty from depot.						
Foreign teak	107,901	7,121,466	..	...	107,901	7,121,466
Do woods of other kinds ...	46	2,300	...	.	46	2,300
British teak	1,967	63,350	...	...	1,967	63,350
Do woods of other kinds ...	274	14,522	...	..	274	14,522
Total ...	109,488	7,201,638	..	...	109,488	7,201,638
Number of drift logs delivered to claimants on payment of salvage .	3,396	122,479	7,419	386,712	10,815	509,191

Form No. 62.—*Abstract for British Burma*—concluded.

Particulars.	Tenasserim.		Pegu.		British Burma.	
	Pieces.		Pieces.		Pieces.	
	Number.	Cubic feet.	Number.	Cubic feet.	Number.	Cubic feet.
Received by transfer from Kado revenue station.						
Drift logs	139	6,660	...	...	139	6,660
Total ...	139	6,660	...	...	139	6,660
Number of logs entered in depôt during 1881-82.						
Foreign teak	95,077	6,464,500	...	...	95,077	6,464,500
Do. woods, other kinds	27	1,431	...	...	27	1,431
British teak	1,523	77,150	...	...	1,523	77,150
Do. woods, other kinds	278	14,600	...	...	278	14,600
Number of drift logs brought into depôts...	5,549	230,416	...	...	5,549	230,416
Total ..	102,454	6,788,097	...	...	102,454	6,788,097
Received in transfer from depôt.						
Teak logs	...	...	16,630	799,073	16,630	799,073
Other kinds	...	...	1,393	56,464	1,393	56,464
Drift teak logs	...	...	220	11,000	220	11,000
Do. other kinds	...	...	587	23,480	587	23,480
Short-delivery at Bangoon depôt ...	...	...	427	21,470	427	21,470
Total ...	...	...	19,246	913,487	19,246	913,487
Drift collected in the various divisions and disposed of locally.						
Teak logs	...	...	7,234	362,890	7,234	362,890
Other kinds	...	...	1,017	41,078	1,017	41,078
Total ...	...	...	8,251	403,968	8,251	403,968
Grand Total ...	265,753	9,008,997	183,953	3,504,767	449,706	12,513,764

Particulars.	Tenasserim.		Pegu.		British Burma.	
	Pieces.		Pieces.		Pieces.	
	Number.	Cubic feet.	Number	Cubic foot.	Number.	Cubic feet.
Converted in depôts.						
Thoungyin logs, teak	415	18,745	...	...	415	18,745
Foreign logs, teak	5	749	...	...	5	749
Upper Salween logs, teak	3	140	...	...	3	140
Drift logs	189	9,160	...	...	189	9,160
Other kinds	399	6,703	...	...	399	6,703
Pyingado sleepers, large	320	1,111	...	...	320	1,111
Total ...	1,331	36,608	...	...	1,331	36,608
Lost or written-off as useless.						
Teak logs and scantlings	...	...	84	3,980	84	3,980
Loss in cutting of teak squares ...	...	1,344	...	...	...	1,344
Total ...	...	1,344	84	3,980	84	5,324
Used by the department.						
Teak planks, boards, and scantlings ...	...	1,820	...	...	...	1,820
Do. shingles	57,000	949	...	...	57,000	949
Pyingado scantlings	...	329	...	...	...	329
Used by the department	20	400	8	400	28	800
Transferred to Salween division depôt...	139	6,660	...	...	139	6,660
Total ...	57,159	10,158	8	400	57,167	10,558
Balance at close of year.						
Teak logs (including 79 scantlings) ...	12,259	642,751	10,839	437,630	23,098	1,080,381
Other kinds logs	668	20,855	2,094	91,706	2,762	112,561
Do. sleepers, large	2,272	7,888	...	...	2,272	7,888
Do. do., small	547	735	...	...	547	735
Thitya sleepers	8	27	...	...	8	27
Other kinds scantlings	...	512	...	...	...	512
Padouk planks	...	89	...	...	...	89
Drift logs	1,787	63,943	1,366	67,948	3,153	131,891
Total ...	17,541	736,800	14,289	597,284	31,830	1,334,084
Grand Total ...	265,753	9,008,997	183,953	3,504,767	449,706	12,513,764

FORM No. 63.—*Timber and other produce cut, collected, and removed from the forests by consumers or purchasers during the year 1881-82.*

Division	Produce removed. Description.	No. or quantity.	Amount of revenue.	Amount actually realized during the year.	Remarks
			Rs.	Rs.	
SALWEEN ...	Thingan trees, purchase-money ...	21	120	.....	
	Do., felling fees ...	242	121	.....	
	Pyingado trees, purchase-money ...	27	54	.....	
	Do., felling fees ...	99	49	.....	
	Thitsee trees, purchase-money ...	...	...	.....	
	Do., felling fees ...	4	2	.....	
	In trees, purchase-money ...	96	74	.....	
	Do., felling fees ...	115	29	.....	
	Pyinma trees, purchase-money ...	1,380	2,178	.....	
	Do., felling fees ...	3,543	886	.....	
	Thitpyoo trees, purchase money ...	22	75	.....	
	Do., felling fees ...	58	29	..	
	Kanyin-oil	...	50	.. .	
	Total ...	5,007	3,667	3,667	
EAST SALWEEN ...	Thingan trees, purchase-money ...	208	3,200	.....	
	Do., felling fees ...	480	240	.....	
	In trees purchase money ...	16	51	.....	
	Do., felling fees ...	15	4	.....	
	Pyinma trees, purchase-money ...	721	1,400	.....	
	Do., felling fees ...	1,812	453	.....	
	Total ...	3,342	5,366	5,366	
WEST SALWEEN	Thingan trees, purchase-money ...	60	387	.....	
	Do., felling fees ...	181	65	.....	
	Pyingado trees, purchase-money ...	60	90	.....	
	Do., felling fees ...	17	8	.....	
	In trees, purchase-money ...	152	181	.....	
	Do., felling fees ...	102	25	.....	
	Pyinma trees, purchase-money ...	684	900	.....	
	Do., felling fees ...	880	220	.....	
	Thitpyoo trees, purchase money...	17	59	.....	
	Do., felling fees ...	233	117	.. ...	
	Total ...	2,343	2,145	2,145	
ATARAN ...	Thingan trees, purchase-money ...	379	2,076	.....	
	Do., felling fees ...	877	438	.....	
	Pyingado trees, purchase-money ...	182	260	.....	
	Do., felling fees ...	336	168	.....	
	In trees, purchase-money ...	886	945	.. ...	
	Do., felling fees ...	806	202	.....	
	Pyinma trees, purchase-money ...	1,128	1,807	...	
	Do., felling fees ...	3,150	786	... .	
	Anan trees, purchase-money ...	25	44	.....	
	Do., felling fees ...	37	19	.....	
	Kanyin trees, purchase money ...	...	...	.....	
	Do., felling fees ...	25	12	... .	
	Total ...	7,781	6,750	6,750	
TAVOY ..	Thingan trees, purchase-money ...	1,268	1,161	.....	
	Do., felling fees ...	85	42	.....	
	Pyingado trees, purchase-money ...	1,008	987	.....	
	Do., felling fees ...	120	52	.....	
	Pyinma trees, purchase-money ...	1,038	480	.....	
	Do., felling fees ...	201	51	.....	
	In trees, purchase-money ...	...	...	.....	
	Do., felling trees ...	...	...	.. ...	
	Anan trees, purchase-money ...	30	19	.....	
	Do., felling fees ...	...	...	...	
	Padouk trees, purchase-money ...	...	...	.	
	Do., felling fees ...	3	1	. ..	
	Magalay trees, purchase-money ...	44	100	.....	
	Do., felling fees ...	15	7	.. .	
	Ingyin trees, purchase-money ...	...	...	.....	
	Do., felling fees ...	6	3	.. ...	
	Kanyin-oil	...	1,905	.....	Rs. 84-11-3 under IIa credited in April 1882.
	Total ...	3,818	4,343	3,554	Rs 704 under IIa credited in April 1882.
MERGUI ...	Thingan trees, purchase-money ...	54	209	.....	
	Do., felling fees ...	86	98	....	
	Pyinma trees, purchase-money ...	9	2	.....	
	Do., felling fees ...	9	2	.....	
	Kanyin trees, purchase-money ...	1	19	.....	
	Do., felling fees ...	...	...	.....	
	Kanyin-oil	...	1,749	.....	Rs. 11-12-6 under IIa credited in April 1882
	Total ...	159	2,009	249	Rs 1,749 under IIa credited in May 1882.
	GRAND TOTAL	24,289		21,740	

FORM No. 63.—*Timber and produce cut, collected, and removed from the forests by consumers or purchasers, including pasture, during the year 1881-82*—continued.

Division.	Produce removed. Description.	Number or quantity.	Amount of revenue.	Amount actually realized during the year.	Remarks.
		c. ft.	Rs.	Rs.	
PROME ...	Teak trees in paddy-fields	8,554	2,426	.....	
	Do., 2nd class	3,810	2,007	.....	
	Do., refuse	955	313	.....	
	In pieces	88,231	4,487	.....	
	Thitya, Ingyin, pyingado, koko and sha pieces	25,203	2,468	.....	
	Sha trees	293	603	.....	
	In trees	2,007	502	.....	
	Thitya				
	Sold to Telegraph Department ...	85	85	.....	
	Thitya, Ingyin, pyingado, koko, and sha ...	635	318	.....	
	Trade permits, B. of Civil Department, Prome	79	26	.....	
	Trade permits, B. of Civil Department, Thayetmyo	6,000	2,132	.....	
	Teak cart-wheels, pairs	1,457	2,914	.....	
	Cutch permits, Prome	...	8,805	.....	
	Ditto, Thayetmyo	...	11,041	.....	
	Bamboos	4,800	11	.....	
	Total ...	...	39,318	39,318	
THARRAWADDY ...	Felling fees on In trees...	2,396	612	.....	
	Ingyin and thitya trees	27		.....	
	Pyingado trees	678	330	.....	
	Thingan trees	53	105	.....	
	Pyinma trees	314		.....	
	Kanyin do.	736	307	.....	
	Sha do.	30	15	.....	
	Realized on tonnage	c. feet.	...	.....	
	In	122,369	4,893	.....	
	Ingyin and thitka	747	93	.....	
	Pyingado	55,543	4,099	.....	
	Sha	111	10	.....	
	Pyinma	18,655	787	.....	
	Kanyin	...	957	.....	
	Thanda	223	9	.....	
	Thingan	1,824	174	.....	
	Tharapee	503	20	.....	
	Toungpeinneh	77	3	.....	
	Sha	114	10	.....	
	Teak trees sold in paddy-fields	3,037	8,822	.....	
	Sha sold, standing number	1,554	4,815	.....	
	Dead sha, ditto	410	41	.....	
	Teak sold, standing	13,575	3,094	.....	
	Refuse teak	4,911	1,355	.....	
	In saplings	1,005	101	.....	
		Permits.			
	Firewood and charcoal	111	666	.....	
	Bamboos	907,875	2,345	.....	
	Grazing and fodder grass	...	132	.....	
		Permits.			
	Minor produce, cutch	1,292	24,440	.....	
	In-oil	15	75	.....	
	Kanyin	38	188	.....	
	Thitkay, at Rs. 2 per 100	495	9	.....	
	Shaw bark, at Re. 1 per 100 viss	22,708	228	.....	
	Thatch grass, at Rs. 2 per 100	15,461	290	.....	
	Cheroot-leaves, at Re. 1 per 20,000 ...	1,147,500	57	.....	
	Wild fruit license	1	10	.....	
	Honey license...	2	20	.....	
	Total ...	...	60,105	60,105	
WESTERN ...	Felling fees on pyingado	2,957	1,430	.....	
	Pyinma	108		.....	
	In	1,781	453	.....	
	Kathit	15		.....	
	Kanyin	42	21	.....	
	Thingan	6	3	.....	
	Anan	2	1	.....	
	Sha	14	7	.....	
	Tonnage	...	...	.....	
	Pyingado	2,344	3,882	.....	
	Pyinma	15	22	.....	
	In	1,376	1,371	.....	
	Kathit	15	38	.....	
	Kanyin	1	5	.....	
	Teak	3	16	.....	
	Thitya	62	23	.....	
	Sha	19	23	.....	
	Charcoal, at Rs. 8 per 100	...	115	.....	
	Ditto by auction	...	31	.....	
	Cutch	At 10 each 78	780	.....	
	Total ...	...	6,221	6,221	

FORM No. 63.—*Timber and produce cut, collected and removed, from the forests by consumers or purchasers, including pasture, during the year 1881-82.*

Division.	Produce removed. Description.	Number or quantity.	Amount of revenue.	Amount actually realised during the year.	Remarks.
			Rs.	Rs.	
AGENCY ...	Tonnage	...	...	.....	
	Thingan	2	9	....	
	Do. boat-hull	1	2	.....	
	Thittoo	32	166	... .	
	Total ...	...	177	177	
RANGOON ...	Felling fees on In	6,802	1,724	. ...	
	Pyinma	1,184	290	. ...	
	Pyingado	206	148	. . .	
	Kanyin	1,203	647	. ....	
	Thingan	80	40	.. ..	
	Ingyin	2	1	. ....	
	Tonnage on in	8,288	9,046	.....	
	Pyinma	1,090	1,091	. . .	
	Pyingado	204	606	.....	
	Kanyin	3,333	16,734	.....	
	Thingan	81	401	.....	
	Ingyin	3	8	.....	
	Thitya	10	12	.....	
	Teak	14	182	.....	
	Charcoal permits	...	300	.....	
	Bamboos	6,00,100	1,500	.....	
	Betel-vines	...	41	.....	
	Extraction of kanyin-oil	...	28	.....	
	In	...	18	.....	
	Thitkay	67 carts	16	.. .	
	Thiu	4 do.	4	.....	
	Thatch	...	4	.....	
	Shan	...	5	.....	
	Saloo	...	1	. .	
	Canes	...	3	.. ...	
	Total ...	...	33,341	33,341	
TOUNGOO ...	Felling fees on pyingado	147	119	.... .	
	Padouk	91			
	Thingan	807	237	.....	
	In	214			
	Pyinma	5	1	.....	
	Tonnage on pyingado	43	148	. . .	
	Padouk	43	91	. ....	
	Thingan	225	1,110	.....	
	Planks, pyingado, and slabs	...	52	.. ..	
	Duty on timber supplied to Public Works Department at Thandoung ...	...	221	. ....	
	Duty on timber supplied to Public Works Department road bangalow ...	...	60	..	
	Recovery on permits	...	18	. . . .	
	Charcoal	...	38	. . .	
	Bamboos	400	1	.....	
	Minor forest produce	...	...	.....	
	Dammer	...	24	.....	
	Kanyin-oil	...	368	.....	
	Thitya	...	200	.....	
	Cutch	...	2,060	.....	
	Canes	...	30	.....	
	Total ...	...	5,888	5,888	
SHWAYOTIN ...	Felling fees on pyingado	488	244	.....	
	Thingan	49	24	.....	
	Kanyin	3	13	.....	
	Thittoo	23			
	Ingyin	11	6	.....	
	Thitya	1			
	Anan	1	1	.....	
	Padouk	1			
	Pyinma	75	19	.....	
	In	191	33	.....	
	Tonnage on pyingado	459	1,326	.....	
	Thingan	50	187	.....	
	Kanyin	3	12	.....	
	Thittoo	23	103	.....	
	Ingyin	4	2	.....	
	Koko	1	5	.....	
	Thingado	2	4	....	
	Pyinma	280	549	...	
	In	187	203	.....	
	Thingan boat-hulls	2	33	.....	
	Pyinma do.	1	6	.....	
	Thitka do.	1	15	.....	
	Refuse teak	6	100	.....	
	Green teak trees	3	29	.....	
	Charcoal	...	390	.....	
	Minor forest produce	...	...	. ....	
	Kanyin-oil	...	600	. ..	
	Thitsee	...	430	...	
	Total ...	...	4,378	4,378	
	TOTAL OF PEGU CIRCLE	...	...	1,51,498	

FORM No. 64.—*Statement showing the revenue derived and expenditure incurred on timber and other produce sold to public departments from depôt during the year 1881-82.*

Division.	Name of department.	Particulars of supplies.	Amount supplied.	Rate. At	Rate. Per	Amount of revenue. Due.	Received.	Outstanding.	Cost to Forest Department. Timber expenses under A.I.	Quota of all other expenditure chargeable against timber, &c.	Total.	Comparison of revenue and expenditure. Surplus.	Deficit.	Remarks.
			Tons Ft. In. P.	Rs. A. P.		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
	Gun-carriage Factory, Madras	11 teak spars ...	17 11 2 5	140 0 0	Ton	2,411	2,411	...	1,308	..	1,308	1,103	...	
		28 logs padouk ...	18 7 1 9	130 0 0	"	2,385	2,385	...	7,725	310	8,035	6,594	...	
		100 ditto ...	90 6 11 9	135 0 0	"	12,174	7,612	4,562						
		Total ...	125 27 3 11	.....	...	16,970	12,408	4,562	9,033	310	9,343	7,697	...	
	Gun-carriage Factory, Bombay	100 teak squares ...	99 38 9 7	75 0 0	Ton	6,808	6,808	...	1,708	160	1,868	4,940	...	
		200 logs padouk ...	150 2 2 7	125 0 0	"	18,756	18,756	...	11,924	620	12,544	6,213	...	
		Total ...	240 41 0 2	.....	...	25,564	25,564	...	13,632	780	14,412	11,152	...	
	Gun-carriage Factory, Fatehgarh	Teak planks ...	69 48 1 6	85 and 180	Ton	8,366	8,366	...	6,669	240	6,909	1,457	...	
	Marine, Eastern division, Calcutta	162 teak logs ...	179 9 3 1	60 0 0	Ton	10,751	...	10,751	1,901	630	2,523	8,229	...	
	Jail Department, Moulmein	321 ditto ..	281 40 0 6	From 19-8-0 to 44-0-0	Each	9,572	9,572	...	3,757	...	3,757	5,815	...	
		232 ditto ...	198 10 9 7	From 10-0-0 to 27-8-0	"	4,306	4,306	...	..	1,739	1,739	2,567	...	
		9 logs thitka ...	9 0 0 0	12 0 0	"	108	108	...	...	67	67	41	...	
		15 do. padouk ...	10 32 2 0	40 0 0	Ton	426	426	...		...				
		6 do. petwoon ...	2 20 0 0	19 0 0	Each	72	72	...	325	...	325	294	...	
		10 padouk planks ...	1 37 6 0	35 0 0	Ton	61	61	...		...				
		Total ...	508 40 5 7	.....	...	14,635	14,635	...	4,082	1,796	5,878	8,757	...	
	Ditto, Tavoy ...	3 teak logs ...	1 30 9 6	18 and 26	Each	62	62	...	36	...	36	26	...	
	Assistant Engineer, do. ...		*Purchase-money.*											
		17 thingan logs ...	24 14 3 0	4 8 0	Ton	109	109	...	...	...	...	109	...	
		63 pyingado do. ...	46 26 10 0	4 8 0	"	209	209	...	...	...	...	209	...	
		148 pyinma do. ...	119 11 2 0	2 0 0	"	239	239	...	...	...	...	239	...	
		39 pyingado and thingan trees ...	Felling-fee	0 8 0	Each	20	20	...	...	...	...	20	...	
		Total ...	190 2 3 0	.....	...	577	577	...	..	...	...	577	...	
	Assistant Superintendent, Telegraphs, Tavoy ...	*Purchase-money.*												
		819 pyingado posts...	115 43 9 10	4 8 0	Ton	521	521	...	...	...	...	521	...	
		1,190 thingan do. ...	163 31 3 0	4 8 0	"	736	736	...	...	...	...	736	...	
		30 anan do. ...	4 6 3 0	4 8 0	"	19	19	...	...	...	...	19	...	
		888 pyinma ...	123 5 0 0	2 0 0	"	244	244	...	...	...	...	244	...	
		Total ...	405 36 3 10	.....	...	1,520	1,520	...	..	...	...	1,520	...	
		Total Tenasserim ...	1,716 35 6 1	.....	...	78,445	63,132	15,313	35,353	3,747	39,100	39,345	...	
											Deduct or deficit		...	
											Balance for the department ..		39,345	

Prome	Executive Engineer ...	Teak	59	3,746	70 0 0	Ton, less Rs 3 each for floating	4,722	...	...	881	636	1,457	3,265	.
	Ditto	Scantling	19											
	Ditto . ..	Squares	4	134 6	50 0 0	Ton	135	4,857	...	54	23	77	58	...
	Ditto	Teak	20	1,392	70 0 0	Ton, less Rs. 3 each for floating	1,989	1,989	..	265	111	376	1,513	...
	Telegraphs	Duty on pyingado logs	30	660	4 8 0	Ton	75		...		26	26	49	...
	Ditto	Thitka posts ...	85	...	1 0 0	.	85	160	...	80	55	75	10	...
		Total ...	217	5,932·6	.	...	6,906	6,906	...	1,160	651	2,011	4,895	..
Tharrawaddy	Executive Engineer ...	Pyingado logs ...	100	..	0 8 0	Each	50	50	...	.	.	...	50	.
	Ditto	Ditto ...	20	...	0 8 0	...	10	10	...	.	..	..	10	.
	Ditto	Ditto ..	200	.	0 8 0	...	100	100		.	.	.	100	..
		Teak	...	12,530	77 10 8	Ton	1,965	1,965		.	.	.	.	..
		Do	...	1,000	61 9 7	...	1,233	1,233	...	22	230	252	3,028	...
		Do	..	9,900	41 1 8	Ton	53	68						
		Pyingado	200		0 8 0	Each	100	100	...	.	.		100	...
		Do. . ..	.	24,371	4 8 0	Ton	2,193	2,193	...		10	10	2,183	..
		Do. ..	...	30,872	4 8 0	,,	2,778	2,778	...		12	12	2,766	...
		Total ...	...		...	...	8,511	8,511	...	22	252	274	8,237	..
Western	Jail Department, Bassein ..	Kateeik .	110	4,306	17 0 0	Ton	1,464	1,464	...	738	172	910	554	.
	Telegraph Department ..	Pyingado .. .	20	...	7 0 0	Each	140	140	...	..	30	30	110	...
	Public Works Department	Do . .	19	...	3 12 0	...	71	71	...	...	18	18	53	...
		Total .	149	...	...	...	1,675	1,675	...	738	220	958	717	
Shwaygyin	Telegraph Department .	Pyingado trees .	70	5,723	4 8 0	Ton	414	414		.	210	210	204	...
	Executive Engineer ..	Do sleepers .	6,254	...	1 10 0	Each								
		Lavanee do .	1,300	..	1 10 0	,,	15,038	15,038	..	12,493	397	12,890	2,158	...
		Toukkyan do .	1,500	...	1 10 0	,,								
		Total .	9,324	...		.	15,452	15,452	...	12,493	597	13,090	2,362	..
Tharawaddy	R. & I. V. S Railway .	Pyingado logs .	16,042	...	8 10 11	Each	1,36,333	1,36,333	...	90,372	12,031	1,02,403	33,930	...
		Felling fees, pyingado	30	..	0 8 0	Tree	15	15	..	...	...	...	15	...
		Pyingado	69	.	0 8 0		35	35	...	...		...	35	...
		Tonnage on pyingado	...	1,050	4 8 0	Ton	95	95	...	...	42	42	53	.
	Public Works Department .	Pyinma	100	.	0 4 0	.	25	25	...	..		.	25	...
		Total .	16,241	...	.	.	1,36,503	1,36,503	...	90,372	12,073	1,02,445	34,058	.
Agency	Government Dockyard .	I, Doogrees ...	31	.	65 0 0	.	2,583	1,775	808	434	742	2,156	8,590	...
	Calcutta .	Loozas . .	98	..		Ton	8,103	8,103	.	980				
	Superintendent, Central Jail	Padouk ..	38	.	55 8 0	...	1,393	...	...	266	112	378	1,014	...
		Total	167	..	...	...	12,078	9,878	808	1,680	854	2,534	9,544	...

FORM No. 64.—*Statement showing the revenue derived and expenditure incurred on timber and other produce sold to public departments from depôt during the year 1881-82*—concluded.

Division.	Name of department.	Particulars of supplies.	Amount supplied.		Rates.		Amount of revenue.			Cost to Forest Department.			Comparison of revenue and expenditure.		Remarks.
					At	Per	Due.	Received.	Outstanding.	Timber expenses under A.I.	Quota of all other expenditure chargeable against timber, &c.	Total.	Surplus.	Deficit.	
			No.	c. ft.	Rs. A. P.		Rs.	Rs.	Rs	Rs.	Rs.	Rs.	Rs.	Rs.	
Annex—concluded.		Brought over ...	167	...	...	...	12,078	9,678	968	1,660	854	2,534	9,544	...	
		I, Doogyees ...	45	...	65 0	...	5,381	...	...	450	373	823	4,558	...	
		II, Do.	199	...	40 0 0	...	11,299	...	...	1,990	1,269	3,259	8,040	...	
		Loozas	178	...	45 0 0	...	10,697	...	...	1,780	1,071	2,851	7,846	...	
		Yard-pieces ...	12	...	...	...	1,271	...	...	240	126	366	905	...	
		Mast-pieces ...	1	...	40 0 0	...	137	30,177	...	40	13	53	84	...	
	R. & I. V. S. Railway ...	Pyingado sleepers ...	21,626	...	1 14 0	Sleepers	40,549	...	...	40,217	847	41,064	274	...	
		Ditto ...	842	...	0 15 0	...	789	41,338	...						
		I, Doogyees ...	11	...	65 0 0	Ton	676			154					
		Loozas	109	...	...	...	7,973			1,090					
		Yathits	78	...	...	...	3,192	15,994	3,821	588	1,323	4,457	15,358	...	
		I, Doogyees ...	93	...	75 0 0	...	7,974			1,302					
		Total ...	23,361	...	...	...	1,02,016	97,387	4,629	49,531	5,876	55,407	46,609	...	
Toungoo.	Public Works Department...	Teak logs	6	300	...	...	441	441	...	221	21	242	199	...	
	Ditto ...	Pyinma	26	1,300	...	...	424	424	...	232	52	334	90	...	
	R. & I. V. S. Railway ...	Sleepers	76,315	...	1 10 0	Sleepers	1,24,112	1,24,112	...	1,06,703	3,180	1,09,883	14,229	...	
		Total ...	76,347	...	...	...	1,24,977	1,24,977	...	1,07,206	3,253	1,10,459	14,518	...	
		Total Pegu Circle...	...		...	...	3,96,040	3,91,411	4,629	2,61,522	23,122	2,84,644	1,11,396	...	
		GRAND TOTAL, B. B...	...	...	...	...	4,74,485	4,54,543	19,942	2,96,875	26,869	3,23,744	1,50,741	...	
											Deduct deficit ...		...		
											Credit balance ...		1,50,741		

FORM No. 65.—*Abstract showing the value of timber and other produce at sale depôts and live and dead stock for the year 1881-82.*

Description of timber and other produce.	ON HAND AT COMMENCEMENT OF THE YEAR			ON HAND AT CLOSE OF THE YEAR.			DIFFERENCE IN VALUE		REMARKS
	No	Cubic feet.	Value	No	Cubic feet.	Value	In favour of the year	Against the the year	
TIMBER.			Rs			Rs	Rs.	Rs.	
Logs, teak	139	7,176	6,161	1,419	74 421	61,726	..	.	
Drift logs	2,440	73,300	29 280	1,787	64,943	25 018	..	..	
Logs, woods of other kinds	192	3,877	2,995	649	19,913	6,934	..	..	
Sleepers	2,098	8,628	7,584	2,927	8,650	7,429	.	.	
Scantlings		387	285	...	001	682		..	
Total Tenasserim, Timber stock	5,469	93,258	46,305	6,682	167,527	1,03,729	57,424		
Live stock	2		2,600	4	..	5,000	.	..	
Buildings	19		12,948	21	..	21,671	.		
Dead stock	...		5,143	..	..	6,026	..		
Total Tenasserim, Live and dead stock	21	.	20,691	25	.	32,697	12,006	.	
Logs, teak	9,707	442,875	2,54,570	11,672	485,562	3,19,080	64,510	...	
Scantlings, teak	70	140	140	..	...	..	.	140	
Sleepers, teak	79	105	120	79	118	120	.		
Woods, other kinds	125	5 000	1,2.0	2,528	111,504	25,280	24,030	...	
Total Pegu, Timber stock	9,981	448.120	2,56,060	14,279	597,184	3,44,480	88,540	140	
Live stock	36	...	49,000	*36	...	45,800	.	3,200	*Includes one calf
Buildings	39	.	54,560	40	..	52,500	...	1,060	
Dead stock	...	...	17,119	...	...	23,400	6,281	...	
Total Pegu, Other stock	...	...	1,19,699	...	...	1,21,700	6,281	4,260	
GRAND TOTAL, BRITISH BURMA	...	...	4,42,775	...	...	6,02,606	1,61,251	4,420	

APPENDIX A.

British Burma.

Statement exhibiting the cost of feed and keep of elephants of the Forest Department for the official year 1881-82, as compared with that of the Commissariat Department for the same period.

Division	Number of elephants at commencement of year	Casualties during year	Number of elephants at close of year	Cost of feed	Cost of keep (including gear)	Cost of medicines	Total expenditure for the year	Average monthly cost per animal of the Forest Department	Average monthly cost per animal of the Commissariat Department	Amount paid by officers for carriage elephants	Value of labour in cash receipts and work performed	Remarks
				Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Salween	2		2	801 8 3	576 0 0	50 8 0	1428 0 3	59 8 0	26 1 8		2,489 8 0	
East Salween			2									
Total	2		4	801 8 3	576 0 0	50 8 0	1428 0 3	59 8 0	26 1 8		2,489 8 0	
Tharrawaddy	4 and 1 calf	1 and 1 calf	3 and 1 calf	91 11 6	1,302 12 7	32 8 0	1427 0 1				3,038 0 0	
Rangoon	6 and 1 calf	1	4		1564 13 6	14 0 0	1,578 12 6				2,540 0 0	
Prome	1	1	2	40 7 6	362 11 10	8 11 0	411 14 4				152 0 0	
Toungoo	7	1	3		2026 1 1	3 6 0	2,029 7 1				570 0 0	
Agency	9	4	10	1,933 0 11	4,913 15 9	83 12 1	6,929 12 9	34 5 5	36 15 6		7,500 14 0	
Western	1		3		966 7 7	6 0 0	972 7 7				3,002 0 0	
Shwaygyin	2		3		576 7 6	21 3 9	597 11 3				1 160 0 0	
Arakan	2	1	2	105 0 6	307 14 9	62 4 0	475 3 3				624 0 0	
Total Pegu Circle	32 and 2 calves	9 and 1 calf	35 and 1 calf	2,170 4 5	12,020 3 7	231 12 10	14,423 4 10	34 5 5	36 15 6		19,201 14 0	
Grand Total	34 and 2 calves	9 and 1 calf	39 and 1 calf	2,971 12 8	12,596 3 7	282 4 10	15 850 5 1				21 691 6 0	

APPENDIX B.

British Burma.

List of buildings of which the cost exceeds Rs. 200 and for occupation of which no rent is paid

Division	No	Name of building	Station	Remarks
Salween	1	Forest Office	Moulmein	
	1	Elephant shed	Do	
	1	Paddy shed	Do	
East Salween	1	Bungalow	Kawkareik	
	1	Rest-house	Gyaing	
West Salween	1	Bungalow	Papoon	
Attaran	1	Rest house	Natchoung	
	1	Guard house	Martaban	
Kado	4	Guard houses	Moulmein	
	3	Offices and two out houses	Kado	
	1	Lascar's house	Do	
	1	Upper guard house	Do	
	1	Lower ditto	Do	
	1	Ditto	Nantay	
South Tenasserim	1	Office	Mergui	
	1	Guard house	Tavoy	
		(a)—On which no rent is paid		
Rangoon	1	Road bungalow	Magayee	
	1	Plantation do	Do	
	1	Ditto	Kyetpyoogan	
	5	Revenue stations	Kayaroo, Zoungtoo Tawlateh Awaing Hlehgoo	
	1	Forest office	Pegu	
Depot Agency	1	Central depot office	Kemmendine Rangoon	
	1	Overseer's quarters		
	6	Guard houses		
	4	Mahouts houses		
	1	Elephant-shed		
	1	Seasoning shed		
Prome	2	Rest houses	Kadinngasin Tounggalay	
Tharrawaddy	1	Store-house	Kangyee	
	1	Forest office	Tharawaddy	
	6	Rest houses	Kangyee Juxaing Gyobinaing Seingalay Hawbin, Waing, Sinyway Kwaymakaing and Koungloungdaing	
Toungoo	1	Forest office	Toungoo	
	4	Rest houses	Pyoon stream Loobyoobin Pabotkweh Patheechoung	
Shwaygyin	1	Forest office	Shwaygyin	
		(b) On which rent is paid		
Prome	1	Forest office	Prome	at Rs 18-8 per mensem.
Tharrawaddy	1	Ditto	Poungdeh	at „ 10 do
	1	First class bungalow	Tharrawaddy	at „ 45 do

APPENDIX C (1).

Statement showing the exports of teak timber during 1881-82 from Rangoon and Moulmein.

Ports.	From Rangoon.			From Moulmein.		
	Logs.	Cubic tons.	Value.	Logs.	Cubic tons.	Value.
			Rs.			Rs.
To United Kingdom	...	7,170	6,01,258	...	41,762	38,48,929
„ Germany (Bremen)	...	7	410	...	..	...
„ Italy (Venice)	...	300	27,000	...	...	...
„ Malta	...	31	2,695	...	...	...
„ Spain (Gibraltar)	...	...	...	...	1,687	1,42,601
„ Cape of Good Hope	...	231	18,500	...	500	53,100
„ Egypt (Port Said)	...	141	14,000	...	...	...
„ Ceylon	...	493	41,410	...	901	65,378
„ Maldives	...	2	150	...	...	..
„ Straits	...	538	47,168	...	410	35,928
„ Sumatra	...	...	...	...	1,170	1,02,660
„ Bengal	...	5,122	4,95,983	...	26,320	17,43,180
„ Bombay	...	8,371	7,24,430	...	25,504	16,59,681
„ Madras	...	29	425	...	7,598	4,45,382
„ Provincial ports	...	10	372	...	3,403	2,29,304
„ Pondicherry...	...	...	...	...	872	55,090
„ Sindh	...	..	...	...	1,002	1,00,210
Total ...	...	22,445	19,14,251	...	1,11,906	84,75,244

APPENDIX C (2).

Statement showing the exports of shingles, sleepers, railway keys, and woods of other kinds in 1881-82.

Articles.	Whither exported.	From Rangoon.		From Moulmein.	
		Quantity.	Value.	Quantity.	Value.
			Rs.		Rs.
Teak-shingles ...	Siam ... ... No.	200	65	...	...
	Strait Settlements .. ... „	20,000	800	650,000	9,605
	Sumatra ... ... „	200,000	3,200	423,158	6,401
	Mauritius ... ... „	14,014	484	...	...
	Bengal .. .. „	251,140	3,791	294,000	3,648
	Provincial ports ... ... „	120,250	2,081	5,067,225	73,251
Wooden sleepers (made of teak and other timber).	Bengal .. .. Cwt.	...	...	10,000	28,022
	Madras .. .. „	...	...	1,750	4,845
	Provincial ports ... ... „	...	...	6,952	17,471
Railway keys (teak) ...	Bengal .. .. Cwt.	...	...	1,964	7,834
	Bombay ... ... „	...	...	90	382
Blocks (teak) ...	Provincial ports ... ... Cwt.	...	...	23	67
Firewood ...	Provincial ports ... ... Tons	75	600	44	700
Sandal-wood ...	Bengal ... ...Value	...	200	...	...
	Madras .. .. „	...	120	...	...
	Provincial ports ... ... „	...	147	...	15
Other timber (timber other than teak).	United Kingdom ... ... Tons	..	...	3	140
	Bengal ... ... „	.	...	1,252	74,591
	Madras ... ... „	20	425	137	12,907
	Bombay ... ... „	...	.	202	19,156
	Provincial ports ... ... „	10	372	1,720	66,959

APPENDIX C (3).

Statement showing the exports of minor forest produce during 1881-82 from the ports of Rangoon and Moulmein.

Articles.	Whither exported.	From Rangoon.		From Moulmein.	
		Quantity.	Value.	Quantity.	Value.
			Rs.		Rs.
Gums and resins—Cutch and gambier.	United Kingdom ... Cwt.	108,745	12,58,950	5,415	92,508
	Spain (Gibraltar) .. ... „	...	...	35	525
	Egypt (Port Said) ... ... „	18,407	2,46,197		
	Ceylon ... ... „	685	13,082		
	China ... ... „	30	300	.	..
	Straits Settlements ... „	7,029	98,044	.	
	Bengal .. .. „	37,597	4,76,350	.	.
	Bombay ... ... „	15,721	1,92,772		
	Madras ... ... „	3,880	64,735	1	23
	Provincial ports .. ... „	3,475	42,470	1	15
Lac, stick	Straits Settlements .. .. Cwt.	120	2,865	...	.
	Bengal .. .. „	3,264	68,849	177	4,116
	Madras .. .. „	3,051	71,525	5	90
	Provincial ports ... .. „	69	1,901	124	2,642
Wood-oil	United Kingdom ... ... Gals.	2,613	3,495	...	.
	Ceylon .. .. „	500	480	...	
	Bengal ... ... „	26	70	...	.
	Madras ... ... „	4,895	4,177	..	..
	Provincial ports . „	143	133	50	37

APPENDIX C (4).

Statement showing the imports of timber and other forest produce during 1881-82 into the ports of Rangoon and Moulmein.

Articles.	Whence imported.	Into Rangoon.		Into Moulmein.	
		Quantity.	Value.	Quantity.	Value.
			Rs.		Rs.
Wood, teak	Provincial ports ... ... Tons	3,647	2,40,008	72	4,900
Other timber	United Kingdom ... ... Tons	7	625	...	.
	Germany . ... „	6	285	...	.
	Straits Settlements... ... „	40	1,550	...	...
	Bengal .. .. „	½	10	...	.
	Provincial ports ... ... „	1,188	50,579	338	4,709
	Karikal ... ... „	.	...	3	60
Firewood	Siam ... ... Tons	50	250		
	Straits Settlements... ... „	467	4,529	92	1,945
	Provincial ports ... ... „	10	100	156	885
Sandalwood	Straits ... ... Value	...	80	...	..
	Bengal ... . „	...	10,417	.	717
	Bombay . ... .. „	...	3,500	.	...
	Madras ... ... „	...	303	..	
	Provincial... ... ... „	..	3,715	...	445
Teak shingles	Provincial ports ... ...Value	...	60,801		.
Sleepers	Provincial ports ... ...Value	..	39,905	..	5,446
Gums and resins—Cutch and gambier.	Bengal .. .. Cwt.	18	225		
	Provincial ports ... „	.	.	5,005	67,686
Lac, stick .. .	Provincial ports .. Cwt	97	2,209	12	306
Wood-oil . .	Provincial ports . Gals.	20,105	15,120	800	75
	Straits Settlements „	179	256	..	

APPENDIX D.

TENASSERIM CIRCLE.

Statement of teak and other trees girdled and forest work done in season 1881-82.

Name and No. of section.	Name of revising officer.	Forest district.	Locality.	Teak trees girdled.	Padouk trees girdled.	Trees counted by revising officer.	Htonkgyan trees girdled.	Pyinma trees girdled.	Ingyin trees girdled.	Thitya trees girdled.	Petwoon trees girdled.	Aukchinza trees girdled.	Soet trees girdled.	Magalay trees girdled.	Chay trees girdled.	Thingan trees girdled.	Manseanga trees girdled.	Kyayseh trees girdled.	Kuruway trees girdled.	Kanzan trees girdled.
1	Mr. A. Ratetty, forest ranger ...	Lower Salween.	Between Meezan and Paan stream on east bank of the Salween	...	...	...	...	...	...	...	...	...	91	...	...	...	...	...	...	...
			Kolone island	...	...	...	...	...	...	...	...	...	28	...	...	...	...	...	...	...
			Meezaing	...	...	...	...	...	...	...	...	...	5	...	...	...	...	...	...	...
			Kamanoung	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kawgayet island	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Myaing	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
		Upper Salween.	Dwaygyo stream	30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Wopeelo stream	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Kalanchinlaw stream	23	...	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Teethaypolaw stream	35	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Nat stream...	47	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Koolo stream	60	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Thachay stream	40	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Mr. H. B. Ward, Assistant Conservator of Forests	Lower Donedamee.	Near bank of Donedamee river between the Pyinmabin and Onekangalay streams	...	...	...	201	...	...	...	...	...	...	...	...	...	...	...	...	...
			Near the bank of the Donedame river between the mouths of Oothoolo and Dawson streams	...	...	...	...	507	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Moung Thee, forester	Thoungyin	Talokolo and Theethaykalof streams	348	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Winsaw stream	127	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Taookeh stream	177	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mehkareh do.	142	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mehkeh do.	260	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	Moung Shway Po, forest apprentice	Hlaingbweh.	Kooso stream	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Teepoto stream	90	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mehloung do.	240	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Thakaw do.	40	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Mehboke do.	9	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Maee and Bookoo streams	73	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Between Thakaw and Hlaingbweh streams	74	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Maee stream	11	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Hlaingbweh stream	29	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
			Teepo-oo do.	223	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Moung Po, forester	Houngdraw	Ansa stream	103	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	Moung Tha Kyan forest apprentice.		Between Kyaik and Meetan on the right bank east of the Houndraw stream	...	100	...	...	1,009	...	...	...	...	...	...	...	...	...	...	...	...
			Anpa stream	...	100	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	Shway Thoung	Ataran ...	Kyein and Nat stream villages and near the mouth of the Maoo stream	...	107	...	...	...	87	22	155	39	...	...	...	...	...	...	...	...
8	Mr. T. H. Aplin, Assistant Conservator of Forests	Tavoy.	Mintha proposed reserve near where the blasting party was at work	...	...	...	...	...	...	...	...	...	...	6	12	...	...	...	...	...
			Mouth of Kan stream, a tributary of the Tavoy river ...	...	...	...	...	30	...	...	...	...	...	...	...	...	...	...	...	...
			Along the banks of the Limba stream	...	...	...	...	180	...	...	...	...	...	...	...	150	5	4	2	3
			Near Meegyoungloung village	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	...
			Near the Kalay stream, a tributary of the Tavoy river ...	...	...	...	...	...	...	...	...	...	...	...	...	...	26	...	...	...
			Near the Nankyeh stream, a tributary of the Tavoy river ...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	7	...	...
			Total ...	2,229	307	60	201	1,666	87	22	155	39	200	6	12	150	39	11	2	3

APPENDIX E.

Statement of outturn of foreign timber for the five years 1877-78—1881-82.

Name of forest	1877-78.				1878-79.				1879-80				1880-81				1881-82.			
	Logs.	Tons	Pieces	Tons.	Logs	Tons.	Pieces.	Tons.	Logs.	Tons	Pieces.	Tons.	Logs.	Tons.	Pieces.	Tons.	Logs.	Tons.	Pieces.	Tons.
Karennee	61,884	68,085	2,983	1,491	46,208	50,509	2,164	1,082	67,899	21,146	1,436	861	60,966	75,397	878	745	52,235	78,352	1,089	969
Kyaingtoung	23,981	26,379	2,449	1,224	12,205	13,424	841	420	12,450	14,907	407	244	8,299	11,688	316	362	7,022	10,533	515	360
Hmaingloneeyee ...	14,285	15,714	385	192	7,914	8,702	96	48	13,245	15,868	51	30	5,772	7,237	74	59	7,455	11,182	476	380
Thoungyin	20,239	22,213	9,153	4,576	26,706	27,308	23,771	11,885	9,663	10,099	5,088	3,052	6,192	7,978	2,639	2,311	14,282	14,282	5,157	3,610
Dagwin	4,918	5,409	183	91	4,490	4,723	366	183	1,072	1,202	226	135	2,413	2,992	402	321	6,128	9,049	838	587
Total ...	125,307	137,751	15,153	7,574	97,434	104,756	27,238	13,618	104,329	123,222	7,208	4,322	83,642	105,292	4,309	3,788	87,022	123,391	8,055	5,899

APPENDIX F.

Statement showing the exports of timber and other forest produce from Moulmein during the year 1881-82.

Articles and countries to which exported.	Denomination	Quantities.	Value.
			Rs.
Wood, Teak—			
To United Kingdom	Tons.	41,762	38,48,929
„ Ceylon	„	901	65,373
„ Straits Settlements	„	497	39,726
„ Gibraltar (Spain)	„	1,067	1,42,601
„ Sumatra	„	1,197	1,03,524
„ Cape of Good Hope	„	590	53,100
„ Pondicherry	„	872	55,090
Total Foreign	„	47,506	43,08,345
To Bombay	„	25,804	16,59,581
„ Kurrachee	„	1,022	1,00,210
„ Bengal—Calcutta	„	26,071	17,25,833
„ Do —Other ports	„	584	37,701
„ Madras—Madras	„	5,002½	3,36,266
„ Do. —Other ports	„	1,025½	1,00,090
Total Home	„	60,770	39,58,707
To Provincial ports	„	3,879	2,44,843
Total Teak	„	112,164	85,21,895
Wood, other timber—			
To Madras	„	224	17,142
„ United Kingdom	„	3	140
„ Bombay	„	207	10,468
„ Bengal—Calcutta	„	1,273	75,202
Total Home	„	1,480	94,750
To Provincial ports	„	1,720	66,959
Total Other timber	„	3,203	1,61,849
Wood manufactures—			
To Strait Settlements	„	127	5,766
„ Sumatra	„	19	1,037
Total Foreign	„	146	6,803
To Bengal—Calcutta	„	259	17,102
„ Madras—Madras	„	234	17,142
Total Home	„	493	34,244
To Provincial ports	„	1,614	68,830
Total Wood manufactures	„	2,253	1,09,877
Gums, cutch—			
To United Kingdom	Cwt.	5,415	92,558
„ Gibraltar (Spain)	„	35	525
Total Foreign	„	5 450	93,083
To Madras—Madras	„	1	22
„ Provincial ports	„	1	15
Total Cutch	„	5,452	93,020
Lac, stick—			
Total, Bengal—Calcutta	„	177	4,136
Do , Madras—Madras	„	5	90
Total Home	„	182	4,226
Provincial Ports	„	6	119
Total Lac, stick	„	188	4,345
Wood-oil—			
Total Provincial ports	Gallons	50	37

APPENDIX G.

Summary of revenue of the different divisions compiled in the Conservator's Office for 1881-82.

Budget heads.	Direction.	Salween proper division.	East Salween division.	West Salween division.	Ataran division.	Tavoy division.	Mergui division.	Kado revenue division.	Total.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FOREST BY GOVERNMENT AGENCY—									
a Timber	.....	77,139 11 4	2,77,118 10 6	20,854 8 0	40,931 1 3	26,290 10 0	.....	.....	4,42,334 9 1
b Firewood and charcoal	.....	.....	.....	.....	.....	.....	.....	.....	.....
c Bamboos	.....	.....	.....	.....	.....	.....	.....	.....	.....
d Sandal-wood	.....	.....	.....	.....	.....	.....	.....	.....	.....
e Grass and other minor produce	.....	36 4 0	.....	.....	.....	.....	.....	.....	36 4 0
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—									
a Timber	.....	3,750 12 0	5,538 9 0	1,934 12 9	6,662 7 0	2,893 14 10	248 13 9	3,647 10 0	24,676 15 4
b Firewood and charcoal	.....	.....	.....	.....	.....	.....	.....	.....	.....
c Bamboos	.....	.....	.....	.....	.....	.....	.....	.....	.....
d Grazing and fodder grass	.....	.....	.....	.....	.....	.....	.....	.....	.....
e Other minor produce	.....	.....	.....	.....	50 0 0	661 0 0	.....	.....	711 0 0
III.—CONFISCATED DRIFT AND WAIF WOOD	.....	15 0 0	.....	.....	180 0 0	390 15 0	275 8 0	96,012 4 0	96,863 11 0
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—									
a Duty on foreign timber and other forest produce	.....	.....	.....	.....	.....	.....	.....	3,32,877 0 0	3,32,877 0 0
b Revenue from shared and private forests	.....	.....	.....	.....	.....	.....	.....	.....	.....
V.—MISCELLANEOUS—									
a Fines and forfeitures	.....	303 0 0	.....	100 0 0	.....	.....	.....	.....	403 0 0
b Refunds	.....	2 6 0	.....	.....	.....	.....	.....	.....	2 6 0
c Other sources	45 8 0	231 0 0	.....	.....	.....	.....	.....	3,780 0 0	4,056 8 0
Total Receipts	45 8 0	81,478 1 4	2,82,657 3 6	22,889 4 9	47,823 8 3	30,226 7 10	524 5 9	4,36,316 14 0	9,01,961 5 5

APPENDIX G

Summary of expenditure of the different divisions, compiled in the Conservator's Office, for 1881-82.

Budget heads	Direction	Salween proper division.	East Salween division.	West Salween division.	Ataran division	Tavoy division	Mergui division	Kado Revenue division.	Total.
A.—CONSERVANCY AND WORKS	Rs. A P	Rs. A. P	Rs. A P	Rs A. P	Rs. A P	Rs A P	Rs A. P	Rs A. P	Rs A P
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—									
a Timber	69 5 8	28,899 8 2	1 09 772 0 10	18 422 10 0	39 691 6 6	30,266 14 0	1 0 0		2 27,122 13 2
b Firewood and charcoal									
c Bamboos									
d. Sandal wood									
e Grass and other minor produce									
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS									
III.—CONFISCATED DRIFT AND WAIF WOOD						807 0 0	21 8 0	43 832 6 0	44,660 14 0
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—									
a. Duty on foreign timber and other forest produce									
b Revenue from shared and private forests									
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHAREHOLDERS IN FORESTS MANAGED BY GOVERNMENT									
VI.—LIVESTOCK, STORES, TOOLS AND PLANT—									
a Purchase of cattle			2 400 0 0						2,400 0 0
b Feed and keep of cattle		1 693 2 0							1 693 2 0
c Stores, tools and plant	184 0 0	907 15 0	199 6 8	110 10 8	40 2 8	264 13 0	3 12 0	823 4 7	2,534 0 7
VII.—COMMUNICATIONS AND BUILDINGS—									
a Roads and bridges								321 10 0	321 10 0
b Buildings	3,611 9 0	3 611 9 0		546 3 0	434 12 0	442 15 4	34 0 0	3 0 0	8,684 0 4
c Other works				14 0 0		1,357 12 8		45 0 0	1,416 13 8
VIII.—DEMARCATION IMPROVEMENT AND EXTENSION OF FORESTS—									
a. Demarcation	184 7 5		5 988 10 10	90 14 0	30 8 0	436 5 2			6 730 13 5
b Compensation for land and rights			190 0 0	125 0 0		54 12 0			369 12 0
c. Surveys and working plans	45 0 0			306 1 3		321 12 9			672 14 0
d Plantations		164 13 0	12 8 0	2,023 13 3	205 8 0	39 9 6	1,838 6 10		5,183 10 7
e Protection from fire			504 8 3	741 4 9	302 0 0				1,597 13 0
f Other works	470 5 3	16 0 0	1,279 1 8	1 298 11 9	1,801 3 0	7 4 0			4,872 9 8
IX.—MISCELLANEOUS—									
a. Refunds		25		50 0 0			6 0 0		81 0 0
b Law charges		133 7 0		24 0 0					157 7 0
c Other charges	12 0 0	15 0 0			54 0 0			10 0 0	121 0 0
TOTAL A.—Conservancy and works	4,576 11 4	35,466 6 2	1,20,396 4 3	24 652 4 8	42,589 8 2	33,999 2 5	1 904 10 10	45,035 4 7	3,08,620 4 5
B.—ESTABLISHMENTS.									
I.—SALARIES—									
a. Conservators	13,435 7 7								13 435 7 7
b. Superior officers	700 0 0	8,400 0 0	6 000 0 0	3,900 0 0	3,976 10 8	3,966 2 0		1,250 0 0	27 492 12 8
c Subordinate forest and depôt establishments		1 12 0 0	1,803 15 0	2,406 0 0	1,259 8 0	728 0 0		5 993 8 0	12 324 15 0
d Office establishments	5,822 10 3	2,378 0 0						5 010 0 0	14,210 10 3
e Deputation and special allowances		2,954 13 6							2,954 13 6
II.—TRAVELLING ALLOWANCES—									
a. Conservators	1,999 0 0								1 999 0 0
b Superior officers			3 481 0 0	1,851 8 0	2,371 8 0	796 0 0			8,500 0 0
c Subordinate forest and depôt establishments									
d Office establishments									
III.—CONTINGENCIES—									
a. Stationery									
b Carriage of tents and records									
c Rents rates and taxes	220 5 11	20 6 1						18 6 0	259 2 0
d. Pay of police guards									
e Official postage	50 12 0	40 0 0				9 2 0			99 14 0
f Sundries	469 3 7	483 10 1	507 5 4	104 1 4	152 5 4	2 7 4	1 0 0	44 0 0	1,763 1 0
TOTAL B.—ESTABLISHMENTS	22,697 7 4	14 408 13 8	11 792 4 4	7 363 9 4	7 760 0 0	5,530 11 4	1 0 0	12,315 14 0	83,059 12 0
GRAND TOTAL OF EXPENDITURE	27,274 2 8	49,875 3 10	1,32,188 8 7	32,015 14 0	50,349 8 2	39,519 13 9	1,905 10 10	57,351 2 7	3,91,680 0 5

APPENDIX H.

Extract from the Forest day-book of the officers of the Forest Department showing the estimated number of teak trees based on countings during 1881-82.

Name of division.	Name of Forest.	Locality.	Year of survey.	By whom surveyed.	Number of tracts surveyed.	Teak. I.	Teak. II.	Teak. III.	Padouk. I.	Padouk. II.	Padouk. III.	Area of tract.	Total of first three classes on 100 acres.	Remarks.
East Salween division.	Hlaingbweh ...	Takaw stream	20th May 1882 ...	Captain C. T. Bingham, Deputy Conservator of Forests.	1	475	4,699	5,620	...	..	...	6 square miles ..	280	Teak is poor in qualities, the trees being branched and stunted; very few young seedlings to be seen.
	Do. ...	Hlaingbweh stream to Takaw stream	Ditto ...		2	561	2,538	7,206	...	...	...	4½ ditto ...	357	.....
	Houngdraw ...	Anchan stream	Ditto ...		3	380	477	960	...	...	...	1½ ditto .	227	Survey taken along both banks of the Anchan stream. The belt of teak lies in five interrupted patches for about 2½ miles along it with an average breadth of about half-a mile. The survey excluded 103 girdled trees, those left, however, being of miserable growth, stunted, crooked, fluted, and nearly all hollow.
	Thoungyin ...	Maylapo to Makeh stream ...	Ditto ...		4	1,032	771	328	..	..	...	4 ditto ..	84	The valley here is very narrow, the teak keeping close to the bank of the Thoungyin river The trees counted are exclusive of those girdled.
	Do. ...	Teak tract between the Hawtaleur and Taookhai streams ...	Ditto ...		5	1,120	426	1,120	...	.	...	3 ditto	138	Exclusive of girdled trees.
	Houngdraw ...	Sources of Outchoo stream ...	25th November 1881		6	.	...	...	3	2	...	¼ ditto ..	1	.....
		Between Yat and Loungthama streams	Ditto ...		7	...	..	...	9	3	..	¼ ditto	3	....
		Sources of the Nounggo stream ...	Ditto ...		8	...	...	...	15	1	...	¼ ditto ...	5	.....
		Between Teeyakaee village and Kyiketone	Ditto ...		9	...	...	..	18	11	..	¼ ditto	9	.....

APPENDIX I.

FOREST DEPARTMENT.—PEGU CIRCLE.

Selling rates in Home market for 1881-82.—Churchill and Sims, Clyde sales.

	£	s.	d.		£	s	d.	£	s.	d
April	13	0	0	to	15	0	0	13	13	4
May	13	0	0	to	15	0	0	13	13	10
June	13	0	0	to	15	0	0	13	2	4
July	13	0	0	to	15	0	0	13	10	0
August	13	0	0	to	15	0	0	14	1	0
September	13	0	0	to	15	0	0	13	15	0
October	13	0	0	to	15	0	0	13	0	0
November	13	0	0	to	15	0	0	13	8	10
December	13	0	0	to	15	0	0	13	0	0
January	13	0	0	to	15	0	0	13	3	2
February	13	0	0	to	15	0	0	13	13	4
March	13	0	0	to	15	0	0	13	12	0

APPENDIX J.

PEGU CIRCLE.

Averages of sales at Central Depôt, Rangoon, 1881-82.

Months.	CLASS I. Per ton.	CLASS II Per ton
	Rs. A. P.	Rs. A. P.
April	*Nil.*	*Nil.*
May	64 15 4	47 13 10
June	59 6 9	40 11 5
July	53 10 9	30 15 6
August	65 14 4	35 11 8
September	70 2 5	42 13 7
October	*Nil.*	*Nil.*
November	*Nil.*	*Nil.*
December	72 5 10	38 8 6
January	60 4 2	51 8 6
February	60 0 4	41 8 6
March	60 4 8	42 6 11